

COMMON ACADEMIC REGULATIONS (R20)
for
ALL AUTONOMOUS COLLEGES OF JNTUK

For

B. Tech Programme

(Applicable for the batches admitted from 2020-21)



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA
KAKINADA – 533003, ANDHRA PRADESH, INDIA

AUTONOMOUS COLLEGES OF JNTUK
COMMON ACADEMIC REGULATIONS (R20) FOR B. TECH PROGRAMME
(Applicable for from the Academic Year 2020-21)

1. Award of B. Tech. Degree

- (a) A student will be declared eligible for the award of B. Tech. Degree if he fulfils the following academic regulations:
- (i) A student shall be declared eligible for the award of B. Tech Degree, if he pursues a course of study in not less than four and not more than eight academic years. After eight academic years from the year of their admission, he/she shall **forfeit** their seat in B. Tech course and their admission stands cancelled.
 - (ii) The candidate shall register for 160 credits and secure all the 160 credits.
- (b) The medium of instruction for the entire under graduate programme in Engineering & Technology will be in **English** only.

2. Programme Pattern:

- a) Total duration of the of B. Tech (Regular) Programme is four academic years
- b) Each Academic year of study is divided into **Two Semesters**.
- c) Minimum number of instruction days in each semester is 90.
- d) Grade points, based on percentage of marks awarded for each course will form the basis for calculation of SGPA (Semester Grade Point Average) and CGPA (Cumulative Grade Point Average).
- e) The total credits for the Programme is 160.
- f) Three week induction program is mandatory for all first year UG students and shall be conducted as per AICTE/UGC/APSCHE guidelines.
- g) Student is introduced to “Choice Based Credit System (CBCS)”.
- h) A pool of interdisciplinary and job-oriented mandatory skill courses which are relevant to the industry are integrated into the curriculum of concerned branch of engineering (total five skill courses: two basic level skill courses, one on soft skills and other two on advanced level skill courses)
- i) A student has to register for all courses in a semester.
- j) All the registered credits will be considered for the calculation of final CGPA.
- k) Each semester has - ‘Continuous Internal Evaluation (CIE)’ and ‘Semester End Examination (SEE)’. Choice Based Credit System (CBCS) and Credit Based Semester System (CBSS) as indicated by UGC and course structure as suggested by AICTE are followed.
- l) A 10 months industry/field mandatory internship, both industry and social, during the summer vacation and also in the final semester to acquire the skills required for job and make engineering graduates to connect with the needs of the industry and society at large.
- m) All the students shall be mandatorily registered for NCC, NSS activities and Community Service Project as per the Government and University norms.
- n) Each college shall assign a faculty advisor/mentor after admission to each student or group of students from same department to provide guidance in courses registration/career growth/placements/opportunities for higher studies/GATE/other competitive exams etc.

3. Registration for Courses:

- a) In each semester a student shall mandatorily register courses which he/she wishes to pursue within a week from the starting of the class work with the advice of Head of the Department and mentor of the student of the concerned department of the college.
- b) If any student wishes to withdraw the registration of the course, he/she shall submit a letter to the Principal of the college through the Head of the Department and mentor within fifteen days.

- c) The concerned college shall thoroughly verify and upload the data/courses registered by each student in the university examination center within 20 days. The Principal of the concerned college shall ensure that there no wrong registration courses by the student. The university registration portal will be closed after 20 days.

4. (a) Award of B. Tech. Degree: A student will be declared eligible for the award of B. Tech. Degree if he fulfills the following academic regulations:

- i. A student shall be declared eligible for award of the B. Tech Degree, if he pursues a course of study in not less than four and not more than eight academic years. After eight academic years from the year of their admission, he/she shall **forfeit** their seat in B. Tech course and their admission stands cancelled.
- ii. The student shall register for 160 credits and must secure all the 160 credits.
- iii. All students shall mandatorily register for the courses like Environmental Sciences, Universal Human Values, Ethics, Indian Constitution, Essence of Indian Traditional Knowledge etc., shall be included in the curriculum as non-credit mandatory courses. Environmental Sciences is to be offered compulsorily as mandatory course for all branches. A student has to secure at least 40% of the marks allotted in the internal evaluation for passing the course and shall maintain 75% of attendance in the subject.
- iv. All students shall mandatorily register for NCC/NSS activities and will be required to participate in an activity specified by NSS officer during second and third semesters. Grade shall be awarded as Satisfactory or Unsatisfactory in the mark sheet on the basis of participation, attendance, performance and behavior. If a student gets an unsatisfactory Grade, he/she shall repeat the above activity in the subsequent years, in order to complete the degree requirements.
- v. Credits are defined as per AICTE norms.

(b) Award of B. Tech. (Honor)/B. Tech. (Minor): B. Tech. with Honors or a B. Tech. with a Minor will be awarded if the student earns 20 additional credits are acquired as per the regulations/guidelines. The regulations/guidelines are separately provided. Registering for an Honors/Minor is optional.

5. Attendance Requirements

- a) A student is eligible to write the University examinations if he acquires a minimum of 40% in each subject and 75% of attendance in aggregate of all the subjects.
- b) Condonation of shortage of attendance in aggregate up to 10% (65% and above, and below 75%) may be granted by the College Academic Committee. However, this condonation concession is applicable only to any two semesters during the entire programme.
- c) Shortage of Attendance below 65% in aggregate shall not be condoned.
- d) A student who is short of attendance in a semester may seek re-admission into that semester when offered within 4 weeks from the date of commencement of class work.
- e) Students whose shortage of attendance is not condoned in any semester are not eligible to write their end semester examination of that class.
- f) A stipulated fee of Rs. 500/- in the concerned semester shall be payable towards condonation of shortage of attendance. Students availing condonation on medical ground shall produce a medical certificate issued by the competitive authority.
- g) A student will be promoted to the next semester if he satisfies the (i) attendance requirement of the present semester and (ii) minimum required credits.
- h) If any candidate fulfills the attendance requirement in the present semester, he shall not be eligible for readmission into the same class.
- i) For induction programme attendance shall be maintained as per AICTE norms.
- j) For non-credit mandatory courses the students shall maintain the attendance similar to credit courses

6. Evaluation-Distribution and Weightage of marks

- (i) Paper setting and evaluation of the answer scripts shall be done as per the procedures laid down by the University Examination section from time to time.
- (ii) To maintain the quality, external examiners and question paper setters shall be selected from reputed institutes like IISc, IITs, IIITs, IISERs, NITs and Universities.
- (iii) For non-credit mandatory courses, like Environmental Sciences, Universal Human Values, Ethics, Indian Constitution, Essence of Indian Traditional Knowledge, the student has to secure 40% of the

marks allotted in the internal evaluation for passing the course. No marks or letter grade shall be allotted for all mandatory non-credit courses.

(iv) A student is deemed to have satisfied the minimum academic requirements if he has earned the credits allotted to each theory/practical design/drawing subject/ project etc by securing not less than 35% of marks in the end semester exam and minimum 40% of marks in the sum total of the internal marks and end semester examination marks together.

(v) Distribution and Weightage of marks:

The assessment of the student's performance in each course will be as per the details given:

S. No	Components	Internal	External	Total
1	Theory	30	70	100
2	Engineering Graphics/Design/Drawing	30	70	100
3	Practical	15	35	50
4	Mini Project/Internship/Industrial Training/ Skill Development programmes/Research Project	-	50	50
5	Project Work	60	140	200

(vi) **Continuous Internal Theory Evaluation:**

- For theory subjects, during a semester, there shall be two mid-term examinations. Each mid-term examination consists of (i) one online objective examination (20 multiple choice questions) for 10 marks for a duration of 20 minutes (ii) one descriptive examination (3 full questions for 5 marks each) for 15 marks for a duration of 90 minutes and (iii) one assignment for marks. All the internal exams shall be conducted as per university norms from first 50% of the syllabi.
- In the similar lines, the second online, descriptive examinations assignment shall be conducted on the rest of the 50% syllabus.
- The total marks secured by the student in each mid-term examination are evaluated for 30 marks. The first mid marks (Mid-1) consisting of marks of online objective examination, descriptive examination and assignment shall be submitted to the University examination section within one week after completion of first mid examination.
- The mid marks submitted to the University examination section shall be displayed in the concerned college notice boards for the benefit of the students.
- If any discrepancy found in the submitted Mid-1 marks, it shall be brought to the notice of university examination section within one week from the submission.
- Second mid marks (Mid-2) consisting of marks of online objective examination, descriptive examination and assignment shall also be submitted to University examination section within one week after completion of second mid examination and it shall be displayed in the notice boards. If any discrepancy found in the submitted mid-2 marks, it shall be brought to the notice of university examination section within one week from the submission.
- Internal marks can be calculated with 80% weightage for better of the two mid exams and 20% Weightage for other mid exam.

Example:

Mid-1 marks = Marks secured in (online examination-1+descriptive examination-1
+one assignment-1)

Mid-2 marks = Marks secured in (online examination-2+descriptive examination-2
+one assignment-2)

Final internal Marks = (Best of (Mid-1/Mid-2) marks x 0.8
+ Least of (Mid-1/Mid-2) marks x 0.2)

- With the above criteria, university examination section will send mid marks of all subjects in consolidated form to all the concerned colleges and same shall be displayed in the concerned college notice boards. If any discrepancy found, it shall be brought to the notice of university examination section through proper channel within one week with all proofs. Discrepancies brought after the given deadline will not be entertained under any circumstances.

(vii) **Semester End Theory Examinations Evaluation:**

- a) The semester end examinations will be conducted university examination section for 70 marks consists of five questions carrying 14 marks each. Each of these questions is from one unit and may contain sub-questions. For each question there will be an “either” “or” choice, which means that there will be two questions from each unit and the student should answer either of the two questions.
- b) For practical subjects there shall be continuous evaluation during the semester for 15 internal marks and 35 end examination marks. The internal 15 marks shall be awarded as follows: day to day work - 5 marks, Record-5 marks and the remaining 5 marks to be awarded by conducting an internal laboratory test. The end examination shall be conducted by the teacher concerned and external examiner appointed.
- c) For the subject having design and / or drawing, (such as Engineering Graphics, Engineering Drawing, Machine Drawing) and estimation, the distribution shall be 30 marks for internal evaluation (15 marks for continuous Assessment (day-to-day work) and 15 marks for internal tests) and 70 marks for end examination. There shall be two internal tests in a Semester for 15 marks each and final marks can be calculated with 80% weightage for better of the two tests and 20% weightage for other test and these are to be added to the marks obtained in day to day work.
- d) Evaluation of the summer internships: It shall be completed in collaboration with local industries, Govt. Organizations, construction agencies, Industries, Hydel and thermal power projects and also in software MNCs in the area of concerned specialization of the UG programme. Students shall pursue this course during summer vacation just before its offering as per course structure. The minimum duration of this course is at least 6 weeks. The student shall register for the course as per course structure after commencement of academic year. A supervisor/mentor/advisor has to be allotted to guide the students for taking up the summer internship. The supervisor shall monitor the attendance of the students while taking up the internship. Attendance requirements are as per the norms of the University. After successful completion, students shall submit a summer internship technical report to the concerned department and appear for an oral presentation before the departmental committee consists of an external examiner; Head of the Department; supervisor of the internship and a senior faculty member of the department. A certificate from industry/skill development center shall be included in the report. The report and the oral presentation shall carry 40% and 60% weightages respectively. It shall be evaluated for 50 external marks at the end of the semester. There shall be no internal marks for Summer Internship. A student shall secure minimum 40% of marks for successful completion. In case, if a student fails, he/she shall reappear as and when semester supplementary examinations are conducted by the University.
- e) The job oriented skill courses may be registered at the college or at any accredited external agency. A student shall submit a record/report on the on the list skills learned. If the student completes job oriented skill course at external agency, a certificate from the agency shall be included in the report. The course will be evaluated at the end of the semester for 50 marks (record: 15 marks and viva-voce: 35 marks) along with laboratory end examinations in the presence of external and internal examiner (course instructor or mentor). There are no internal marks for the job oriented skill courses.
- f) Mandatory Course (M.C): Environmental Sciences, Universal Human Values, Ethics, Indian Constitution, Essence of Indian Traditional Knowledge etc non-credit (zero credits) mandatory courses. Environmental Sciences shall be offered compulsorily as mandatory course for all branches. A minimum of 75% attendance is mandatory in these subjects. There shall be an external examination for 70 marks and it shall be conducted by the college internally. Two internal examinations shall be conducted for 30 marks and a student has to secure at least 40% of the marks for passing the course. There is no online internal exam for mandatory courses. No marks or letter grade shall be printed in the transcripts for all mandatory non-credit courses, but only Completed (Y)/Not-completed (N) will be specified.
- g) **Procedure for Conduct and Evaluation of MOOC:** There shall be a Discipline Centric Elective Course through Massive Open Online Course (MOOC) as Program Elective course. The student shall register for the course (Minimum of 12 weeks) offered by SWAYAM/NPTEL through online with the approval of Head of the Department. The Head of the Department shall appoint

one mentor for each of the MOOC subjects offered. The student needs to register the course in the SWAYAM/NPTEL portal. During the course, the mentor monitors the student's assignment submissions given by SWAYAM/NPTEL. The student needs to submit all the assignments given and needs to take final exam at the proctor center. The student needs to earn a certificate by passing the exam. The student will be awarded the credits given in curriculum only by submission of the certificate. In case if student does not pass subjects registered through SWAYAM/NPTEL, the same or alternative equivalent subject may be registered again through SWAYAM/NPTEL in the next semester with the recommendation of HOD and shall be pass.

h) *Major Project* (Project - Project work, seminar and internship in industry):

In the final semester, the student should mandatorily register and undergo internship and in parallel he/she should work on a project with well-defined objectives. At the end of the semester the candidate shall submit an internship completion certificate and a project report. A student shall also be permitted to submit project report on the work carried out during the internship. The project report shall be evaluated with an external examiner.

Evaluation: The total marks for project work 200 marks and distribution shall be 60 marks for internal and 140 marks for external evaluation. The supervisor assesses the student for 30 marks (Report: 15 marks, Seminar: 15 marks). At the end of the semester, all projects shall be showcased at the department for the benefit of all students and staff and the same is to be evaluated by the departmental Project Review Committee consisting of supervisor, a senior faculty and HOD for 30 marks. The external evaluation of Project Work is a Viva-Voce Examination conducted in the presence of internal examiner and external examiner and is evaluated for 140 marks.

7. Results Declaration:

- (i) Before results declaration, an academic council meeting shall be conducted and results shall be placed before the academic council for approval.
- (ii) With the approval of academic council, the results shall be submitted to the University to get the approval from Honorable Vice-Chancellor.
- (iii) The University may normalize the result, if required, before declaration of the result (Guidelines for normalization will be provided separately)
- (iv) A copy of approved results in a CD shall be submitted to the University examination Center.

8. Academic Audit: Academic audit in each semester will be conducted as per norms.

9. Recounting or Re-evaluation of Marks in the End Semester Examination: A student can request for recounting of revaluation of his/her answer book on payment of a prescribed fee as per university norms.

10. Supplementary Examinations: A student who has failed to secure the required credits can appear for a supplementary examination, as per the schedule announced by the University.

11. Malpractices in Examinations: Disciplinary action shall be taken in case of malpractices during Mid/End examinations as per the rules framed by the University.

12. Promotion Rules

The following academic requirements have to be satisfied in addition to the attendance requirements mentioned in item no.5 for promotion to higher classes

- a) A student shall be promoted from first year to second year if he fulfills the minimum attendance requirement as per University norm.
- b) A student will be promoted from II year to III year if he fulfills the academic requirement of 40% of credits up to either II year I-Semester or II year II-Semester from all the examinations, whether or not the candidate takes the examinations and secures prescribed minimum attendance in II year II semester.
- c) A student shall be promoted from III year to IV year if he fulfills the academic requirements of 40% of the credits up to either III year I semester or III year II semester from all the examinations, whether or not the candidate takes the examinations and secures prescribed minimum attendance in III year II semester.

13. Course Pattern

- a) The entire course of study is for four academic years; all years are on semester pattern.

- b) A student eligible to appear for the end semester examination in a subject, but absent from it or has failed in the end semester examination, may write the exam in that subject when conducted next.
- c) When a student is detained for lack of credits / shortage of attendance, he may be re-admitted into the same semester/year in which he has been detained. However, the academic regulations under which he was first admitted shall continue to be applicable to him.

14. Earning of Credit:

A student shall be considered to have completed a course successfully and earned the credits if he/she secures an acceptable letter grade in the range A+ to E as given below. Letter grade 'F' in any course implies failure of the student in that course and no credits earned. Absent is also treated as no credits earned. For project same % percentages will be followed for grading.

Marks Range Theory (Max – 100)	Marks Range Lab (Max – 50)	Level	Letter Grade	Grade Point
≥ 90	≥ 45	Outstanding	A+	10
≥80 to <89	≥40 to <44	Excellent	A	9
≥70 to <79	≥35 to <39	Very Good	B	8
≥60 to <69	≥30 to <34	Good	C	7
≥50 to <59	≥25 to <29	Fair	D	6
≥40 to <49	≥20 to <24	Satisfactory	E	5
<40	<20	Fail	F	0
-		Absent	AB	0

15. Award of Class

After a student has satisfied the requirements prescribed for the completion of the program and is eligible for the award of B. Tech. Degree, he shall be placed in one of the following four classes:

Class Awarded	CGPA to be secured	Remarks
First Class with Distinction	≥ 7.75 (Without any supplementary appearance)	From the CGPA secured from 160 Credits
First Class	≥ 6.75	
Second Class	≥ 5.75 to < 6.75	
Pass Class	≥ 5.00 to < 5.75	

16. Minimum Instruction Days

The minimum instruction days for each semester shall be 90 working days. There shall be no branch transfers after the completion of the admission process. There shall be no transfer from one college/stream to another within the Constituent Colleges and Units of Jawaharlal Nehru Technological University Kakinada.

17. Withholding of Results

If the student is involved in indiscipline/malpractices/court cases, the result of the student will be withheld.

18. Transitory Regulations

- a) Discontinued or detained candidates are eligible for re-admission as and when next offered.
- b) The re-admitted candidate will be governed by the rules & regulations under which the candidate has been admitted.
- c) (i) In case of transferred students from other Universities, credits shall be transferred to JNTUK as per the academic regulations and course structure of JNTUK.
- d) The students seeking transfer to colleges affiliated to JNTUK from various other Universities / Institutions have to obtain the credits of any equivalent subjects as prescribed by JNTUK. In addition, the transferred candidates have to pass the failed subjects at the earlier Institute with already obtained internal/sessional marks to be conducted by JNTUK.

19. Gap - Year

Gap Year concept of Student Entrepreneur in Residence shall be introduced and outstanding students who wish to pursue entrepreneurship are allowed to take a break of one year at any time after I/II/III year to pursue entrepreneurship full time. This period shall be counted for the maximum time for graduation. An evaluation committee at university level shall be constituted to evaluate the proposal submitted by the student and the committee shall decide on permitting the student for availing the Gap Year.

20. General

- a) Wherever the words “he”, “him”, “his”, occur in the regulations, they include “she”, “her”, “hers”.
- b) The academic regulation should be read as a whole for the purpose of any interpretation.
- c) In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Vice-Chancellor is final.
- d) The University may change or amend the academic regulations or syllabi at any time and the changes or amendments made shall be applicable to all the students with effect from the dates notified by the University.

ACADEMIC REGULATIONS (R19) FOR B. TECH. (LATERAL ENTRY SCHEME)

Applicable for the students admitted into II year B. Tech. from the Academic Year 2020-21 onwards

1 **Award of B. Tech. Degree**

A student will be declared eligible for the award of B. Tech. Degree if he fulfills the following academic regulations:

- a) A student shall be declared eligible for the award of the B. Tech Degree, if he pursues a course of study in not less than three academic years and not more than six academic years. After six academic years from the year of their admission, he/she shall **forfeit** their seat in B. Tech course and their admission stands cancelled.
- b) The candidate shall register for 121 credits and secure all the 121 credits.

2. The attendance regulations of B. Tech. (Regular) shall be applicable to B.Tech (lateral entry).

3. **Promotion Rules**

A student shall be promoted from second year to third year if he fulfills the minimum attendance requirement.

A student shall be promoted from III year to IV year if he fulfills the academic requirements of 40% of the credits up to either III year I semester or III year II semester from all the examinations, whether or not the candidate takes the examinations and secures prescribed minimum attendance in III year II semester.

4. **Award of Class**

After a student has satisfied the requirement prescribed for the completion of the program and is eligible for the award of B. Tech. Degree, he shall be placed in one of the following four classes:

Class Awarded	CGPA to be secured	Remarks
First Class with Distinction	≥ 7.75 (Without any supplementary appearance)	From the CGPA secured from 121 Credits from II Year to IV Year
First Class	≥ 6.75	
Second Class	≥ 5.75 to < 6.75	
Pass Class	≥ 5.00 to < 5.75	

The Grades secured, Grade points and Credits obtained will be shown separately in the memorandum of marks.

5. All the other regulations as applicable to **B. Tech. 4-year degree course (Regular)** will hold good for **B. Tech. (Lateral Entry Scheme)**

COMMUNITY SERVICE PROJECT

Introduction

1. Community Service Project is an experiential learning strategy that integrates meaningful community service with instruction, participation, learning and community development
2. Community Service Project involves students in community development and service activities and applies the experience to personal and academic development.
3. Community Service Project is meant to link the community with the college for mutual benefit. The community will be benefited with the focused contribution of the college students for the village/ local development. The college finds an opportunity to develop social sensibility and responsibility among students and also emerge as a socially responsible institution.

Objective

Community Service Project should be an integral part of the curriculum, as an alternative to the 2 months of Summer Internships / Apprenticeships / On the Job Training, whenever there is an exigency when students cannot pursue their summer internships. The specific objectives are;

1. To sensitize the students to the living conditions of the people who are around them,
2. To help students to realize the stark realities of the society.
3. To bring about an attitudinal change in the students and help them to develop societal consciousness, sensibility, responsibility and accountability
4. To make students aware of their inner strength and help them to find new /out of box solutions to the social problems.
5. To make students socially responsible citizens who are sensitive to the needs of the disadvantaged sections.
6. To help students to initiate developmental activities in the community in coordination with public and government authorities.
7. To develop a holistic life perspective among the students by making them study culture, traditions, habits, lifestyles, resource utilization, wastages and its management, social problems, public administration system and the roles and responsibilities of different persons across different social systems.

Implementation of Community Service Project

1. Every student should put in a minimum of **180 hours** for the Community Service Project during the summer vacation.
2. Each class/section should be assigned with a mentor.
3. Specific Departments could concentrate on their major areas of concern. For example, Dept. of Computer Science can take up activities related to Computer Literacy to different sections of people like - youth, women, house-wives, etc
4. A log book has to be maintained by each of the student, where the activities undertaken/involved to be recorded.
5. The log book has to be countersigned by the concerned mentor/faculty in charge.
6. Evaluation to be done based on the active participation of the student and grade could be awarded by the mentor/faculty member.
7. The final evaluation to be reflected in the grade memo of the student.
8. The Community Service Project should be different from the regular programmes of NSS/NCC/Green Corps/Red Ribbon Club, etc.
9. Minor project report should be submitted by each student. An internal Viva shall also be conducted by a committee constituted by the principal of the college.
10. Award of marks shall be made as per the guidelines of Internship/apprentice/ on the job training

Procedure

1. A group of students or even a single student could be assigned for a particular habitation or village or municipal ward, as far as possible, in the near vicinity of their place of stay, so as to enable them to commute from their residence and return back by evening or so.

2. The Community Service Project is a twofold one –
- a) First, the student/s could conduct a survey of the habitation, if necessary, in terms of their own domain or subject area. Or it can even be a general survey, incorporating all the different areas. A common survey format could be designed. This should not be viewed as a duplication of work by the Village or Ward volunteers, rather, it could be another primary source of data.
 - b) Secondly, the student/s could take up a social activity, concerning their domain or subject area. The different areas, could be like –
 - Agriculture
 - Health
 - Marketing and Cooperation
 - Animal Husbandry
 - Horticulture
 - Fisheries
 - Sericulture
 - Revenue and Survey
 - Natural Disaster Management
 - Irrigation
 - Law & Order
 - Excise and Prohibition
 - Mines and Geology
 - Energy
 - Internet
 - Free Electricity
 - Drinking Water

EXPECTED OUTCOMES

BENEFITS OF COMMUNITY SERVICE PROJECT TO STUDENTS

Learning Outcomes

1. Positive impact on students' academic learning
2. Improves students' ability to apply what they have learned in "the real world"
3. Positive impact on academic outcomes such as demonstrated complexity of understanding, problem analysis, problem-solving, critical thinking, and cognitive development
4. Improved ability to understand complexity and ambiguity

Personal Outcomes

1. Greater sense of personal efficacy, personal identity, spiritual growth, and moral development
2. Greater interpersonal development, particularly the ability to work well with others, and build leadership and communication skills

Social Outcomes

1. Reduced stereotypes and greater inter-cultural understanding
2. Improved social responsibility and citizenship skills
3. Greater involvement in community service after graduation

Career Development

1. Connections with professionals and community members for learning and career opportunities
2. Greater academic learning, leadership skills, and personal efficacy can lead to greater opportunity

Relationship with the Institution

1. Stronger relationships with faculty
2. Greater satisfaction with college
3. Improved graduation rates

BENEFITS OF COMMUNITY SERVICE PROJECT TO FACULTY MEMBERS

1. Satisfaction with the quality of student learning
2. New avenues for research and publication via new relationships between faculty and community
3. Providing networking opportunities with engaged faculty in other disciplines or institutions
4. A stronger commitment to one's research

BENEFITS OF COMMUNITY SERVICE PROJECT TO COLLEGES AND UNIVERSITIES

1. Improved institutional commitment
2. Improved student retention
3. Enhanced community relations

BENEFITS OF COMMUNITY SERVICE PROJECT TO COMMUNITY

1. Satisfaction with student participation
2. Valuable human resources needed to achieve community goals
3. New energy, enthusiasm and perspectives applied to community work
4. Enhanced community-university relations.

SUGGESTIVE LIST OF PROGRAMMES UNDER COMMUNITY SERVICE PROJECT

The following the recommended list of projects for Engineering students. The lists are not exhaustive and open for additions, deletions and modifications. Colleges are expected to focus on specific local issues for this kind of projects. The students are expected to carry out these projects with involvement, commitment, responsibility and accountability. The mentors of a group of students should take the responsibility of motivating, facilitating, and guiding the students. They have to interact with local leadership and people and appraise the objectives and benefits of this kind of projects. The project reports shall be placed in the college website for reference. Systematic, Factual, methodical and honest reporting shall be ensured.

For Engineering Students

1. Water facilities and drinking water availability
2. Health and hygiene
3. Stress levels and coping mechanisms
4. Health intervention programmes
5. Horticulture
6. Herbal plants
7. Botanical survey
8. Zoological survey
9. Marine products
10. Aqua culture
11. Inland fisheries
12. Animals and species
13. Nutrition
14. Traditional health care methods
15. Food habits
16. Air pollution
17. Water pollution
18. Plantation
19. Soil protection
20. Renewable energy
21. Plant diseases
22. Yoga awareness and practice
23. Health care awareness programmes and their impact
24. Use of chemicals on fruits and vegetables
25. Organic farming
26. Crop rotation
27. Floury culture
28. Access to safe drinking water

29. Geographical survey
30. Geological survey
31. Sericulture
32. Study of species
33. Food adulteration
34. Incidence of Diabetes and other chronic diseases
35. Human genetics
36. Blood groups and blood levels
37. Internet Usage in Villages
38. Android Phone usage by different people
39. Utilization of free electricity to farmers and related issues
40. Gender ration in schooling level- observation.

Complimenting the community service project, the students may be involved to take up some awareness campaigns on social issues/special groups. The suggested list of programmes are;

Programmes for School Children

1. Reading Skill Programme (Reading Competition)
2. Preparation of Study Materials for the next class.
3. Personality / Leadership Development
4. Career Guidance for X class students
5. Screening Documentary and other educational films
6. Awareness Programme on Good Touch and Bad Touch (Sexual abuse)
7. Awareness Programme on Socially relevant themes.

Programmes for Women Empowerment

1. Government Guidelines and Policy Guidelines
2. Womens' Rights
3. Domestic Violence
4. Prevention and Control of Cancer
5. Promotion of Social Entrepreneurship

General Camps

1. General Medical camps
2. Eye Camps
3. Dental Camps
4. Importance of protected drinking water
5. ODF awareness camp
6. Swatch Bharat
7. AIDS awareness camp
8. Anti Plastic Awareness
9. Programmes on Environment
10. Health and Hygiene
11. Hand wash programmes
12. Commemoration and Celebration of important days

Programmes for Youth Empowerment

1. Leadership
2. Anti-alcoholism and Drug addiction
3. Anti-tobacco
4. Awareness on Competitive Examinations
5. Personality Development

Common Programmes

1. Awareness on RTI
2. Health intervention programmes
3. Yoga

4. Tree plantation
5. Programmes in consonance with the Govt. Departments like –
 - i. Agriculture
 - ii. Health
 - iii. Marketing and Cooperation
 - iv. Animal Husbandry
 - v. Horticulture
 - vi. Fisheries
 - vii. Sericulture
 - viii. Revenue and Survey
 - ix. Natural Disaster Management
 - x. Irrigation
 - xi. Law & Order
 - xii. Excise and Prohibition
 - xiii. Mines and Geology
 - xiv. Energy

Role of Students:

1. Students may not have the expertise to conduct all the programmes on their own. The students then can play a facilitator role.
2. For conducting special camps like Health related, they will be coordinating with the Governmental agencies.
3. As and when required the College faculty themselves act as Resource Persons.
4. Students can work in close association with Non-Governmental Organizations like Lions Club, Rotary Club, etc or with any NGO actively working in that habitation.
5. And also, with the Governmental Departments. If the programme is rolled out, the District Administration could be roped in for the successful deployment of the programme.
6. An in-house training and induction programme could be arranged for the faculty and participating students, to expose them to the methodology of Service Learning.

Timeline for the Community Service Project Activity

Duration: 8 weeks

1. Preliminary Survey (One Week)

- a) A preliminary survey including the socio-economic conditions of the allotted habitation to be conducted.
- b) A survey form based on the type of habitation to be prepared before visiting the habitation with the help of social sciences faculty. (However, a template could be designed for different habitations, rural/urban.
- c) The Governmental agencies, like revenue administration, corporation and municipal authorities and village secretariats could be aligned for the survey.

2. Community Awareness Campaigns (Two Weeks)

Based on the survey and the specific requirements of the habitation, different awareness campaigns and programmes to be conducted, spread over two weeks of time. The list of activities suggested could be taken into consideration.

3. Community Immersion Programme (Four Weeks)

Along with the Community Awareness Programmes, the student batch can also work with any one of the below listed governmental agencies and work in tandem with them. This community involvement programme will involve the students in exposing themselves to the experiential learning about the community and its dynamics. Programmes could be in consonance with the Govt. Departments.

4. Community Exit Report (One Week)

During the last week of the Community Service Project, a detailed report of the outcome of the 8 weeks works to be drafted and a copy shall be submitted to the local administration. This report will be a basis for the next batch of students visiting that particular habitation. The same report submitted to the teacher-mentor will be evaluated by the mentor and suitable marks are awarded for onward submission to the University.

Throughout the Community Service Project, a daily log-book need to be maintained by the students batch, which should be countersigned by the governmental agency representative and the teacher-mentor, who is required to periodically visit the students and guide them.

MALPRACTICES RULES

DISCIPLINARY ACTION FOR / IMPROPER CONDUCT IN EXAMINATIONS

	Nature of Malpractices/Improper conduct	Punishment
	<i>If the candidate:</i>	
1. (a)	Possesses or keeps accessible in examination hall, any paper, note book, programmable calculators, Cell phones, pager, palm computers or any other form of material concerned with or related to the subject of the examination (theory or practical) in which he is appearing but has not made use of (material shall include any marks on the body of the candidate which can be used as an aid in the subject of the examination)	Expulsion from the examination hall and cancellation of the performance in that subject only.
(b)	Gives assistance or guidance or receives it from any other candidate orally or by any other body language methods or communicates through cell phones with any candidate or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that subject only of all the candidates involved. In case of an outsider, he will be handed over to the police and a case is registered against him.
2.	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the subject of the examination (theory or practical) in which the candidate is appearing.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the subjects of that Semester/year. The Hall Ticket of the candidate is to be cancelled and sent to the University.
3.	Impersonates any other candidate in connection with the examination.	The candidate who has impersonated shall be expelled from examination hall. The candidate is also debarred and forfeits the seat. The performance of the original candidate who has been impersonated, shall be cancelled in all the subjects of the examination (including practicals and project work) already appeared and shall not be allowed to appear for examinations of the remaining subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat. If the imposter is an outsider, he will be handed over to the police and a case is registered against him.
4.	Smuggles in the Answer book or additional sheet or takes out or arranges to send out the question paper during the examination or answer book or additional sheet, during or after the examination.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.
5.	Uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks.	Cancellation of the performance in that subject.
6.	Refuses to obey the orders of the Chief Superintendent/Assistant – Superintendent / any officer on duty or misbehaves or creates disturbance of any kind in and around the examination hall or organizes a walk out or instigates others to walk out, or threatens the officer-in charge or any person on duty in or outside the examination hall of any injury to his person or to any of his relations whether by words, either spoken or written or by signs or by visible representation, assaults the officer-in-charge, or any person on duty in or outside the examination hall or any of his relations, or indulges in any other act of misconduct or mischief which result in damage to or destruction of property in the examination hall or any part of the College campus or engages in any other act which in the opinion of the officer on duty	In case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that subject and all other subjects the candidate(s) has (have) already appeared and shall not be permitted to appear for the remaining examinations of the subjects of that semester/year. The candidates also are debarred and forfeit their seats. In case of outsiders, they will be handed over to the police and a police case is registered against them.

	amounts to use of unfair means or misconduct or has the tendency to disrupt the orderly conduct of the examination.	
7.	Leaves the exam hall taking away answer script or intentionally tears the script or any part thereof inside or outside the examination hall.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the candidate is subject to the academic regulations in connection with forfeiture of seat.
8.	Possess any lethal weapon or firearm in the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred and forfeits the seat.
9.	If student of the college, who is not a candidate for the particular examination or any person not connected with the college indulges in any malpractice or improper conduct mentioned in clause 6 to 8.	Student of the colleges expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The candidate is also debarred and forfeits the seat. Person(s) who do not belong to the College will be handed over to police and, a police case will be registered against them.
10.	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year.
11.	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that subject and all other subjects the candidate has appeared including practical examinations and project work of that semester/year examinations.
12.	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be reported to the University for further action and impose suitable punishment.	

Malpractices identified by squad or special invigilators

1. Punishments to the candidates as per the above guidelines.
2. Punishment for institutions: (if the squad reports that the college is also involved in encouraging malpractices)
 - (i) A show because notice shall be issued to the college.
 - (ii) Impose a suitable fine on the college.
 - (iii) Shifting the examination centre from the college to another college for a specific period of not less than one year.

* * * * *



Ragging

Prohibition of ragging in educational institutions Act 26 of 1997

Salient Features

- Ragging within or outside any educational institution is prohibited.
- Ragging means doing an act which causes or is likely to cause Insult or Annoyance of Fear or Apprehension or Threat or Intimidation or outrage of modesty or Injury to a student.

	Imprisonment upto		Fine Upto
Teasing, Embarrassing and Humiliation	 6 Months	+	Rs. 1,000/-
Assaulting or Using Criminal force or Criminal intimidation	 1 Year	+	Rs. 2,000/-
Wrongfully restraining or confining or causing	 2 Years	+	Rs. 5,000/-
Causing grievous hurt, kidnapping or Abducts or rape or committing unnatural offence	 5 Years	+	Rs. 10,000/-
Causing death or abetting suicide	 10 Months	+	Rs. 50,000/-

In Case of Emergency CALL TOLL FREE NO. : 1800 - 425 - 1288

LET US MAKE JNTUK A RAGGING FREE UNIVERSITY

**GOVERNMENT OF ANDHRA PRADESH
DEPARTMENT OF TECHNICAL EDUCATION**

Lr.No: EHE02-16021/49/2025-E SEC-CTE

Date: 25.05.2025

From

Sri G. Ganesh Kumar, I.A.S.,
Director of Technical Education, A.P.,
Garudadri K.K. Towers,
Lakshminarasimha Colony,
Near NTR Vaidya Seva Trust,
Mangalagiri , Guntur District-522503.

To

The Registrars of all State Universities
in AP.

Sir / Madam,

Sub: Technical Education – E-Section – Engineering / Pharmacy / Architecture / MBA / MCA Students Transfers for the Academic Year 2025-26 from one Professional Institution to another Professional Institution within the same University Affiliation – Through online mode – Certain Instructions Issued – Reg.

Ref: 1. G.O.Ms.No:122, Dated: 01.09.2005 of Higher Education (EC.2) Dept., Andhra Pradesh.
2. G.O.Ms.No:66, Dated: 15.05.2008 of Higher Education (EC.2) Dept., Andhra Pradesh.
3. G.O.Ms.No:03, Dated: 06.01.2011 of Higher Education (EC.2) Dept., Andhra Pradesh.
4. This office Lr.No: E/Students transfers/2020, Dated: 11.08.2021 addressed to the Principal Secretary to Government, Higher Education (EC) Dept., Andhra Pradesh.

With reference to the Engineering / Pharmacy / Architecture / MBA / MCA Students Transfers for the Academic Year 2025-26 from one Professional Institution to another Professional Institution within the same University Affiliation, the Registrars of the Universities in the State are hereby requested to communicate and instruct the Principals of the Professional Institutions affiliated with the University, to follow the schedule shown below scrupulously:

Web address for filing online application	http://dteapengg.in
Date of commencement of filing the online application through web-application.	16.06.2025
Last date for filing the online application.	31.07.2025
Last date for submission of No Objection Certificate (NOC) by the colleges through web- application.	14.08.2025
Processing Fee to be paid by the student through Payment Gateway available in the web-application	Rs.2000/-
<u>Mode of issue of transfer orders of eligible students:</u> Orders shall be placed under Notifications Tabs in Department of Technical Education, Andhra Pradesh websites: www.dteap.nic.in and http://dteapengg.in	
<u>Documents to be submitted by the Student through web-application:</u> 1. Original copy of Medical Certificate of the student issued by the Civil Assistant Surgeon (or) Transfer Order of the Parent (or)	

- AICTE/University approval copy of the Closure of Course/ Institution.
2. Under Taking signed by the Student and Parent/Guardian
3. Payment Receipt of Processing Fee paid through the Payment Gateway

Documents to be submitted by the College through web-application:

1. Original copy of the No Objection Certificate (NOC) issued by the college to the student requesting transfer to/from the college.
2. The Principals of the colleges have to submit the following details through college login in the web-application with the credentials provided by this office (as per user manual placed in website).
 - (c) Branch-wise unfilled vacancies details for the academic year 2025-26 in 2nd year / 3rd year / 4th year.
 - (d) Total intake details for the academic year 2024-25 and Autonomous status (Proof of ratified list by APSICHE / Final admitted list through Management / Convener quota shall be uploaded)

Reasons for requesting transfer:

1. Hardship of the student on Health grounds
2. Transfer of the parents serving in State/Central Government/Corporations/ PSUs.
3. Closure of Course/Institution (supporting documents shall be uploaded)

Reasons for rejection of applications:

1. Student provides FALSE information.
2. Student is NOT issued No Objection Certificate (NOC) by both Colleges from/to which the student is requesting transfer.
3. Student FAILS to pay the Processing Fee.

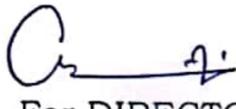
The user manual for the students for submitting online application and the user manual for the institutions for submitting No Objection Certificates NOCs and Branch-wise unfilled vacancies details for the academic year 2025-26 in 2nd year / 3rd year / 4th year along with Total intake details for the academic year 2024-25 are available at website: <http://dteapengg.in>. Further instructions with respect to Students Transfers, if any, will be placed in the website only and no individual communications shall be sent. The Processing Fee once paid, will not be refunded under any circumstances: i.e. transfer effected or not, NOC is not issued by the institution, as the case may be. For any queries, regarding filing online application of Students Transfers may be sent to cteapeh2018@gmail.com.

In this context, the Registrars of the Universities in the State are hereby requested to instruct the Principals of the Professional Institutions affiliated with the University to guide the students requesting transfer, to file the applications in the web-application, as per the guidelines specified in Government Orders, and further requested to instruct the Principals to submit the No Objection Certificates (NOCs) of and Branch-wise unfilled vacancies details along with Total intake details, through the web-application only.

Yours faithfully
Sd/- G GANESH KUMAR
DIRECTOR

Copy to

1. The Principals of all Private Un-Aided Engineering / Pharmacy / Architecture / MBA / MCA colleges in the State.
2. The Principal Secretary to Government, Higher Education (EC) Dept., AP for favour of information
3. The Secretary, APSICHE, Mangalagiri for favour of information


For DIRECTOR


Guidelines for Students Transfers through online
for the academic year 2025-26

1. Power of transfer of students from one Engineering / Pharmacy / Architecture / MBA / MCA College to another college at 2nd, 3rd, 4th and 5th year is delegated to the Commissioner of Technical Education, Andhra Pradesh to avoid delay and hardship to the students.
2. Transfer from Private Engineering College to a University College in any region shall not be permitted, because the University colleges if opt by the students not only causes practical problems, but also creates an imbalance in the homogeneity of the learners group.
3. The transfers may be permitted from one affiliated College to another or from a University college to a private (affiliated) college within the same university at the 2nd year stage on issue of NOCs from both the colleges.
4. No transfer can be permitted from one University affiliated private college to another University affiliated private college as all the Universities in the State are not following uniform syllabus and uniform system of examination.
5. No transfer can be permitted from autonomous college to other colleges and vice versa even though they are within the same university as the autonomous institutes are not following uniform syllabus and uniform system of examination
6. The total transfers including III & IV year if any should not exceed more than 1% of the total strength of the first year of the college.
7. Transfers at III and IV year can be considered under extreme hardship conditions on a case by case, consideration.
8. The transfer College may be permitted to fill up the unfilled seats of the previous year by transfer from the colleges affiliated to the same University on production of NOC by the college.
9. The transfer should be only in that branch of Engineering in which the student was studying in the college from where the transfer is sought.
10. Bulk Transfers are not permitted unless there is a closure of Institution / Course.
11. Student can apply for the transfer through online only at the URL: <http://dteapengg.in> only and No physical applications are accepted under any circumstances.
12. Students who are seeking to transfer are required to file their application with all supporting documents such as Medical Certificate / Parent transfer order / Proof of closure of course or institute (whichever is applicable), processing fee payment receipt etc., in online through the web application using the above link. The student needs to consult both the college before filing application.
13. Transfers are applicable to :
 - (a) One Private Professional College to another Private Professional College of same University (if both the institutes are non-autonomous)
 - (b) University constituent college to Private College of same university (if both the institutes are non-autonomous)
14. The students who wish to apply for transfer should pay the processing fee of Rs. 2,000/- through Payment Gateway and the receipt shall be uploaded in the portal.
15. The students shall file the applications in the portal for transfer, only after consultation from their present studying college and transfer seeking college for

issue of NOCs, as the processing fee once paid will not be refunded under any circumstances (even if the college not issued NOC / the transfer not effected)

16. Further instructions with respect to student transfers if any will be placed in the <http://dteapengg.in> only and no individual communications shall be sent either to student or college. For any clarifications on filling of online application for transfer and issue of NOC by the college, the queries may be sent to cteapeh2018@gmail.com.
17. The transfers will be affected based on the following conditions with respect to tuition fee. The Student / Parents / Principals / Managements of the Institutions, concerned will be held responsible in case of any anomaly.
- (a) Students who are admitted under Category B i.e. Management quota or Spot admissions under Category A in an institution and subsequently transferred to other institution under 1% ceiling or unfilled vacancies of Convenor quota i.e. Category A are not eligible to claim tuition fee reimbursement / Scholarship.
- (b) Students who are admitted under Convenor Quota (i.e. Category A) & eligible for fee reimbursement, if subsequently, transferred to other institutions under the unfilled vacancy of Category B seats shall not be eligible to claim Tuition Fee Reimbursement / scholarship.
- (c) The difference in the tuition fee to be paid in the Institutions now transferred shall be the responsibility of the students / Parents.

Sd/- G GANESH KUMAR
DIRECTOR



For DIRECTOR



Undertaking by the Student & Parent for Student Transfer from one Professional Institution to another Professional Institution for the Academic year 2025-26

I, _____ Son / Daughter of _____ studied ___ Year ___ Semester of B.Tech. / B.Pharmacy / Pharm.D / B.Arch. / MBA / MCA in the college: _____ have applied for transfer to the college _____ for the Academic year 2025-26.

I state that, I, myself studied the Students Transfers guidelines specified in **G.O.Ms.No: 122, Higher Education (EC.2) Department, Dated 01.09.2005 and Letter No. EHE02-16021/49/2025-E SEC-CTE, Dated: 25.05.2025 issued by the Director of Technical Education, Andhra Pradesh** and understood the procedure involved in effecting the transfers. I am aware that No Objection Certificate (NOC) is only a document required to process the transfer, but the receipt of the No Objection Certificates (NOCs) from the colleges does not confer the transfer.

Important:

1. Students who are admitted under Category B i.e. Management quota or Spot admission under Category-A in an institution and subsequently transferred to other institution under 1% ceiling or unfilled vacancies of Convenor quota i.e. Category A are not eligible to claim tuition fee reimbursement / Scholarship.
2. Students who are admitted under Convenor Quota (i.e., Category A) & eligible for fee reimbursement, if subsequently, transferred to other institutions under the unfilled vacancy of Category B seats shall not be eligible to claim Tuition Fee Reimbursement / scholarship.
3. The difference in the tuition fee to be paid in the Institutions now transferred shall be the responsibility of the students/Parents.
4. The student transfer processing fee, once paid will not be refunded under any circumstances (even if the transfer not effected/ college not issued NOC)

I have gone through the above mentioned points from Sl.No: 1 to 4 and accepted to follow. I am aware that, the college i am seeking transfer will reopen on _____(date) and in order to maintain the attendance and consider the academics, I state that, I, will continue in my college where I am studying at present i.e. _____ (college studying) till my transfer is effected to new college. I also state that, I am solely responsible for the consequences, if I leave the college where I am studying without any transfer orders from the competent authority.

Parent / Guardian Signature

Student Signature

(FORMAT FOR MEDICAL CERIFICATE)

MEDICAL CERTIFICATE

This is to certify that _____,
Registration No: _____, Son / Daughter of _____,
age: _____ years is studying _____ Year _____ Semester in the college: _____
_____ is suffering from _____
due to _____.

Hence, I am advising him/her to _____
_____.

Date:

Place:



Signature with stamp

(Government Medical Officer

NOT below the rank of Civil Assistant Surgeon)

Name :

Designation :

Registration No :

NOTE:

The diagnosis reports (if any) are here with enclosed.



**APPGECET-ADMISSIONS-2025
DETAILED NOTIFICATION**

- ❖ The qualified and eligible candidates of APPGECET-2025 are informed to attend APPGECET-2025 web counseling for admission into M. Tech /M. Pharmacy – Pharm.D (PB) courses for the academic year 2025-26 as per the schedule given below and verification will be online only.

Sl. No	Activity	Dates
1	Web Counseling Registration & Uploading of certificates	17-07-2025 to 21-07-2025
2	Online Certificate Verification	18-07-2025 to 22-07-2025
3	Special Category Certificate Verification at APPGECET-2025 Office, Examination Building, AU College of Engineering, Andhra University, Visakhapatnam.	21-07-2025 Reporting time 10:00 A.M.
4	Web Options	19-07-2025 to 23-07-2025
5	Change of web options	24-07-2025
6	Allotment of Seats	26-07-2025
7	Reporting at the allotted Colleges	27-07-2025 to 29-07-2025
8	Commencement of Class Work	28-07-2025

- ❖ Candidates are informed that they should satisfy the admission rules prescribed in the related G.O. besides satisfying the eligibility criteria of the respective Universities and should be prepared to pay the tuition fee as applicable.
- ❖ The left over seats after allotment for GATE/GPAT Candidates will be available for APPGECET-2025 Candidates.
- ❖ The notification itself is a call for counseling. No separate call letters will be sent to the individual candidates.
- ❖ Mere attending Web counseling does not guarantee a seat.
- ❖ APPGECET-2025 qualified candidates have to pay counseling fee through online in <https://cets.apsche.ap.gov.in>
- ❖ Candidates have to pay a non-refunded counseling fee of Rs: 1000/- for OC/BC and Rs: 500/- for SC/ST Candidates.
- ❖ Counseling fee shall be paid online using credit card/debit card/ net banking options.
- ❖ Enter APPGECET-2025 Hall Ticket number and Rank, and click on pay fee online. Select any one mode of payment credit card / debit card/net banking and enter credentials. Once the transaction is successful, note the transaction ID.

Certificates to be uploaded by Sports / PH/NCC/CAP / Bharat Scouts Candidates along with other originals.

- ❖ PH Category: Candidates had to produce a certificate issued by the district medical board and only candidates who have disability of 40% and above are eligible.

CAP Category: Ex-Service personal have to produce the following

1. Service Certificate issued by Zill Sainik Wellfair Officer
2. Identity Card
3. Discharge Book for verification

Serving persons have to produce service certificate for the place of work indicating the relationship with candidate. **Only candidates whose parents or domicile of A.P. are eligible to considered under 'CAP' Category.**

- ❖ NCC/SPORTS Category: Candidates have to produce concerned certificates along with A.B.C. Certificates (s).

Note: The decision of the authorities of NCC/CAP/PH/Sports/Bharat Scouts is final with regards to priorities fixed and convener has no role with the priorities assigned.

ATTENTION OF CANDIDATES

APPGECET Rankers who secure admissions only in Government universities are ELIGIBLE for Fee Reimbursement.

CERTIFICATES TO BE UPLOADED

The following Original Certificates are to be uploaded.

Sl No	Certificates
1	APPGECET-2025 Rank Card & APPGECET-2025 Hall Ticket
2	Provisional Certificate/Degree Certificate & Memorandum of marks of qualifying Examination
3	Memo of SSC or its equivalent
4	Study Certificate from 10 th class to Graduation OR Residence Certificate for preceding 7 years from the qualifying examination Graduation in respect of candidates who have private study without any institutionalized education (Aadhaar card / House hold card)
5	Integrated community certificate issued by the competent authority in case of BC/SC/ST candidates
6	Residence certificate of father or mother for a period of 10 years in A.P. excluding the period of their employment outside A.P. from M.R.O. in case of candidates who studied outside the State of A.P.
7	Transfer Certificate for the institution last studied
8	Income Certificate / House hold card (while)/Ration Card
9	EWS Certificate issued by Tahsildar, if applicable.
10	Candidates who have studies in Telangana but wish to claim AU/SVU regions have to submit Local Status Certificate.



ANDHRA PRADESH STATE COUNCIL OF HIGHER EDUCATION

(A Statutory Body of the Government of A.P)

3rd, 4th and 5th floors, Neeladri Towers, Sri Ram Nagar, 6th Battalion Road,
Atmakur (V), Mangalagiri (M), Guntur-522 503, Andhra Pradesh

Web: www.apsche.org. Email: secretary@apsche.org



PROF. Y. NAZEER AHAMMED
SECRETARY

Lr.No. APSCHE/CETs/EAPCET-2024/CAT-B/NRI/Notification/1

Dt.24.07.2024

To
The Principals of Private Un-Aided Non-Minority Engineering Institutions
Andhra Pradesh.

Sir/Madam,

Sub: APSCHE-EAPCET-2024-CAT-B-filling up of NRI quota-Instructions-Reg.

Ref: 1.G.O.Ms. No.32, Higher Education (EC.2) Department, dated 27.08.2022
2.G.O.Ms. No.33, Higher Education (EC.2) Department, dated 27.08.2022

-o0o-

With a view to streamline admission process in the interest of students, government has issued revised guidelines for admissions into Category-B seats in private un-aided, Non-Minority professional institutions to ensure admissions to the eligible meritorious candidates in a fair, transparent and non-exploitative manner. With reference to the GOs cited above the Govt. of Andhra Pradesh has issued detailed guidelines for admission to the Category-B (Management) quota seats.

NRI seats in various branches of B.Tech shall be filled as per the following procedure:

- The institutions shall issue a notification to fill the Category-B-NRI seats and complete the admission process of NRI seats as per the schedule given below.
- The institutions that are approved by AICTE are permitted to fill NRI seats not exceeding 15% of the sanctioned intake in each course for the academic year. The institutions shall admit NRI candidates (Sons and daughters of NRIs) who have passed the qualifying examination with not less than 50% marks in the prescribed group subjects or 50% aggregate marks in the qualifying examination or cumulative Grade Point Average (CGPA) equivalent to 5 on a point scale of 10.
- Tuition fee of US\$5,000/- (US Dollars) per annum shall be paid by the candidate admitted under this category.
- Unfilled Category-B-NRI seats shall be converted into Category-B Non-NRI seats.
- The sanctioned intake shall be as approved by AICTE and affiliation by respective affiliating university for the Academic year 2024-25.

The private un-aided, Non-Minority professional institutions offering B.Tech program shall fill 15% NRI seats in each branch as per the schedule given below:

APEAPCET-2024 Schedule for filling up of NRI quota seats under Category-B

Release of Notification	24.07.2024
Last date to receive applications	27.07.2024
Publishing list of selected candidates	29.07.2024
Last date for communicating the Category-B Non-NRI and unfilled seats of NRI quota seats with all details as per the format	30.07.2024

The institutions shall communicate the Cat-B Non-NRI and unfilled NRI seats along with fee structure to the Secretary, APSICHE as per the format given below:

Format for communicating Cat-B Non-NRI and unfilled NRI seats to Secretary, APSICHE

Name and Code of the Institution:

Place:

Branch	Sanctioned Intake	30% Cat-B seats	15% NRI Seats		15% NON-NRI Seats (C)	Total (B+C)	Fee for Cat-B (Non-NRI) Seats p.a in Rs.
			Filled (A)	Vacant (B)			

The above details shall reach the Secretary, APSICHE on or before 30.07.2024.


24/7/24
SECRETARY

AP EAPCET 2024

(Engineering, Agriculture and Pharmacy Common Entrance Test- 2024)

Conducted by

JNT University Kakinada

on behalf of

Andhra Pradesh State Council for Higher Education (APSCHE)

**Dates of Examination: 13-05-2024 to 16-05-2024
(9.00 A.M. to 12.00 Noon & 2.30 P.M to 5.30 P.M)**

INSTRUCTION BOOKLET ENGINEERING

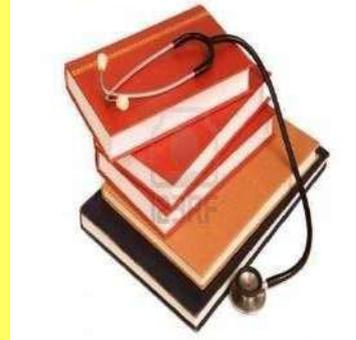
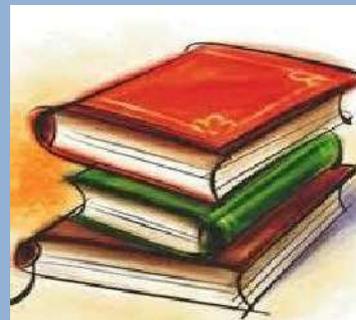
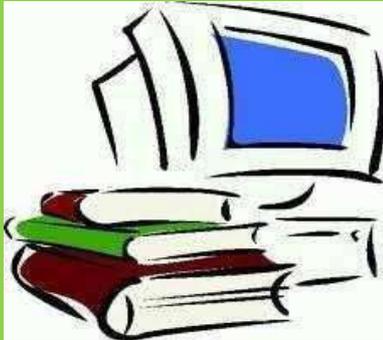
ENGINEERING, AGRICULTURE & PHARMACY COMMON ENTRANCE TEST



JNT University Kakinada
Kakinada



Andhra Pradesh State Council of Higher Education
Tadepalli, Guntur District.



ENGINEERING

ENGINEERING, AGRICULTURE & PHARMACY COMMON ENTRANCE TEST
(being conducted by JNTUK on behalf of APSCHE)

AP EAPCET-2024

FOR ENTRANCE TEST RELATING TO PROFESSIONAL COURSES IN

- a) Engineering, Bio-Technology, B.Tech. (Dairy Technology), B.Tech.(Agr.Engg.), B.Tech. (Food Science and Technology)
- b) B.Sc. (Ag)/ B.Sc. (Hort)/ B.V.Sc. & A.H/B.F.Sc
- c) B. Pharmacy, Pharm.D

Note: Information about the Entrance test is also available on the Website
<https://cets.apsche.ap.gov.in/>

LAST DATES FOR SUBMISSION OF ONLINE APPLICATION	
WITHOUT LATE FEE	15-04-2024
WITH LATE FEE Rs.500/-	30-04-2024
WITH LATE FEE Rs.1000/-	05-05-2024
WITH LATE FEE Rs.5000/-	10-05-2024
WITH LATE FEE Rs. 10000/-	12-05-2024

Address for Correspondence:

CONVENER, AP EAPCET – 2024,

GROUND FLOOR, ADMINISTRATIVE BUILDING

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA

KAKINADA – 533003, ANDHRA PRADESH

Contact No: 0884-2359599, 0884-2342499

Email ID: helpdeskapecet@apsche.org

AP EAPCET - 2024 (ENGINEERING)

A Common Entrance Test designated as “Engineering, Agriculture & Pharmacy Common Entrance Test” (AP EAPCET – 2024) will be conducted by JNT University Kakinada, Kakinada for the academic year 2024-2025 for admission into the First Year of Professional Courses i.e (i) **Engineering, Bio-Technology, B.Tech. (Dairy Technology), B.Tech. (Agr. Engg.), B.Tech. (Food Science and Technology)**, (ii) **B.Sc. (Ag)/ B.Sc. (Hort)/ B.V.Sc. & A.H/B.F.Sc & (iii) B. Pharmacy, Pharm. D.**

1) PARTICULARS OF AP EAPCET – 2024

- ❖ The Test will be conducted from **13-05-2024 to 16-05-2024 in two sessions every day i.e. 9.00 A.M. to 12.00 P.M. and 2.30 P.M to 5.30 P.M** through Online mode only.
- ❖ The question paper consists of a total of 160 questions comprising 80 questions in Mathematics, 40 questions in Physics, and 40 questions in Chemistry.
- ❖ All questions are of objective type (multiple choice) only and each question carries one mark. The syllabus in Mathematics, Physics, and Chemistry is furnished in Annexure-I. The model questions are given in Annexure-II.
- ❖ A sample/mock test will be available on the <https://cets.apsche.ap.gov.in> website for practice purposes and to give the candidate a look and feel of the On-Line (Computer Based) Examination.

2) ELIGIBILITY TO APPEAR FOR AP EAPCET – 2024

Candidates satisfying the following requirements shall be eligible to appear for AP EAPCET-2024:

- a. Candidates should be of Indian Nationality or Persons of Indian Origin (PIO) / Overseas Citizen of India (OCI) Card Holders.
- b. Candidates should belong to the state of Andhra Pradesh / Telangana. The candidates should satisfy Local / Non-Local status requirements as laid down in the Andhra Pradesh / Telangana Educational Institutions (Regulation of Admission) order, 1974 as subsequently amended (See Annexure III).
- c. Candidate should have obtained at least 45% marks (40% in case of candidate belonging to reserved category) in the subjects specified taken together in the qualifying examination.
- d. For Engineering, B.Pharmacy (M.P.C), Pharm.D, B.Tech. (Dairy Technology), B.Tech. (Agr. Engineering), B.Tech. [Food Science and

Technology (FS & T)], B.Sc. [Agriculture Engg] courses:

- (i) Candidates should have passed Intermediate Examination (10+2 pattern) with Mathematics, Physics, and Chemistry as options or related vocational courses in the fields of Engineering and Technology, conducted by the Board of Intermediate Education, Andhra Pradesh / Telangana, along with bridge course or courses conducted by it for candidates enrolled from the academic year 2000 onwards, or any other examination recognized as equivalent thereto by the Board of Intermediate Education, Andhra Pradesh / Telangana. However, the candidates who have appeared for the Final Year Intermediate Examination (10+2 Pattern) and who are awaiting their results may also apply for APEAPCET 2024, but their ranks obtained in APEAPCET 2024 will be valid only if they pass the Intermediate Examination.

OR

- (ii) Candidates should have passed the Diploma examination in Engineering conducted by the State Board of Technical Education and Training, Andhra Pradesh / Telangana or any other examination recognized as equivalent there to by the State Board of Technical Education and Training, Andhra Pradesh / Telangana. However, the candidates who have appeared for the Diploma examination in Engineering and who are awaiting their results may also apply for APEAPCET 2024, but their ranks obtained in APEAPCET 2024 will be valid only if they pass the Diploma examination in Engineering.

- (iii) a) In the case of Engineering, Pharmacy courses, candidates should have completed 16 years of age as of 31st December of the year of admission (2024). There is no upper age limit.

b) In the case of B.Tech. (Dairy Technology), B.Tech. (Agr. Engineering), B.Tech. (FS & T) and B.Sc. (Agr. Engg), candidates should have completed 17 years of age as of 31st December of the year of admission (2024) and an upper age limit is 22 years for all the candidates and 25 years in respect of Scheduled Caste and Scheduled Tribe candidates as on 31st December of the year of Admissions (2024).

- e. (i) For Pharm. D course candidates should have passed the Intermediate Examination (10+2 pattern) with Physics, Chemistry, and Mathematics as options conducted by the Board of Intermediate Education, Andhra Pradesh / Telangana, or any other examination recognized by the Board of Intermediate Education, Andhra Pradesh / Telangana, or equivalent. However, the candidates who have appeared for

the Final Year Intermediate Examination (10+2 Pattern) and who are awaiting their results may also apply for AP EAPCET 2024, but their ranks obtained in AP EAPCET 2024 will be valid only if they pass the Intermediate Examination.

- (iii) The candidates should have completed 17 years of age as of 31st December of the year of admission (2024) to the above course.

3) GENERAL INFORMATION / INSTRUCTIONS:

a) The Convener, AP EAPCET – 2024 reserves the right to reject the application of the candidate at any stage, if:

- (I) The Online Application Form is incomplete.
- (II) The candidate fails to satisfy the eligibility conditions.
- (III) Any false or incorrect information is furnished.
- (IV) The Online Application Form is submitted after the due date.
- (V) No correspondence will be entertained in this regard.

b) The Convener is not responsible for non-receipt of application by the notified date and time for any reason.

4) MEDIUM OF ENTRANCE TEST:

The question paper contains questions in the “English” and “Telugu” medium only. Candidates, who have studied the qualifying examination in Urdu medium and wish to avail assistance for translating the questions into Urdu, **will be allotted a Test Centre at Kurnool only. In case of ambiguity in the Telugu Question, the Question given in English shall be taken as final.**

5) REGISTRATION FEE:

Payment of Registration Fee for submission of Online Application Form is the first step and the Registration Fee is Rs. 600/- for students belonging to the open category (for SC/ST Candidates Rs 500/- and for BC Candidates Rs 550/-) which has to be paid through any kind of Online Payment Modes (Credit Card/ Debit Card/Net Banking/ AP Online / TS Online etc) from any Recognized Bank.

6) SAME CENTRE FOR CANDIDATES APPEARING FOR BOTH ENGINEERING AND AGRICULTURE & PHARMACY:

Candidates of E – Category who are eligible and desirous of taking the test in AP- Category, in addition to the test for E - Category should **select the option Both (E & AP Category) together**, during the submission of the Online Application Form, so that same Test Centre can be allotted to them for both the tests. If this instruction is not followed, the candidate may be allotted different Test Centres for E & AP category tests, and Convener, AP EAPCET- 2024 is not responsible for the allotment of different centers.

7) REGIONAL CENTERS

District	RC1	RC2	RC3
Anakapalle	Anakapalle		
Anantapur	Ananthapuramu	Gooty	Tadipatri
Annamayya	Madanapalle	Rayachoti	Rajampet
Bapatla	Bapatla	Chirala	
Chittoor	Chittoor	Palamner	
East Godavari	Rajahmundry		
Eluru	Eluru		
Guntur	Guntur		
Kakinada	Kakinada		
Konaseema	Amalapuram		
Krishna	Gudlalleru	Machilipatnam	
Kurnool	Kurnool	Adoni	Yemmiganur
Nandyal	Nandyal		
NTR	Mylavaram	Tiruvuru	Vijayawada
Palnadu	Narasaraopeta		
Prakasam	Markapuram	Ongole	
Sri Potti Sriramulu Nellore	Kavali	Nellore	
Sri Sathya Sai	Puttaparthi		
Srikakulam	Srikakulam	Tekkali	
Tirupati	Puttur	Tirupati	Gudur
Visakhapatnam	Anandapuram	Gajuwaka	Visakhapatnam
Vizianagaram	Rajam	Bobbili	Vizianagaram
West Godavari	Tadepalligudem	Bhimavaram	Narasapuram
YSR Kadapa	Kadapa	Proddatur	
Hyderabad	LB Nagar	Secunderabad	

- Note:** 1. The Convener reserves the right to add or delete some online Test Centers from the list of Regional Centers notified.
2. The Convener reserves the right to allot the candidates to any online Test Centre other than that opted by the candidates.
3. Candidate has to submit not more than one application either for “E” or “AP” or “E&AP” category test. If any candidate submits more than one application for one category, the Convener reserves the right to reject all the applications or accept any one of them.

8. SUBMISSION OF ONLINE APPLICATION FOR AP EAPCET – 2024

Applications should be submitted through Online mode only.

The following information must be kept ready for filling the details during Online submission:

- a. Hall ticket Number of Qualifying Examination
- b. Hall ticket Number of S.S.C. or equivalent
- c. Date of Birth
- d. Caste Certificate in case of SC/ST/BC candidates
- e. Aadhar Number
- f. PH, NCC, Sports etc.
- g. Income Certificate (Upto One Lakh or Up to Two Lakhs or More than Two Lakhs(Rupees))
- h. Ration Card
- i. Study or Residence or relevant certificate for proof of local status (last 12 years)

Online submission:

For Online submission, visit the website <https://cets.apsche.ap.gov.in>. A candidate has to pay Rs.600/- as Registration Fee (for SC/ST Candidates Rs 500/- and for BC Candidates Rs 550/-) and late fee (if applicable) by opting any kind of Online Payment Modes (Credit Card/ Debit Card/Net Banking/ AP Online / TS Online etc) from any Recognized Bank. After filling out the Online Application Form with the required details, the candidate is required to verify all the details carefully and press Submit button. A filled in Online Application Form will be generated which contains the Registration Number along with filled in details. The candidate is required to take a printout of the Filled In Online Application Form and it is to be submitted to the Invigilator during the examination **after affixing a recent color photograph duly attested by the Gazetted Officer or Principal of the College where the candidate has studied qualifying examination.** The candidate should use the Registration Number for future correspondence.

Mere appearance and qualifying at AP EAPCET-2024 does not confer any right for admission into professional courses. The candidate has to fulfill the eligibility criteria laid down in the relevant G.O at the time of admission.

9. QUALIFYING MARKS FOR AP EAPCET – 2024

The qualifying percentage of marks for the AP EAPCET-2024 is 25% of the maximum marks considered for the ranking. However, for candidates belonging to Scheduled Caste and Scheduled Tribe, no minimum qualifying mark is prescribed. But their admission will be limited to the extent of seats reserved for such categories (vide G.O.Ms. No. 179, LEN&TE, dated 16.06.1986).

10. AP EAPCET-2024 RESULTS

1. **Evaluation:** Every care will be taken to avoid errors in the evaluation, checking, scrutiny, tabulation, normalization, and ranking.

2. Ranking:

- a. Candidates shall be ranked based on the EAPCET normalized marks (75% weightage) and 10+2 (25% weightage) in the order of merit as explained in Annexure-IV and Annexure-V.
- b. The rank obtained in AP EAPCET-2024 is valid for admission to the courses mentioned in the application form for the academic year 2024-2025 only.
- c. The rank card shall be downloaded from the website <https://cets.apsche.ap.gov.in>
- d. Rank obtained with the benefit of relaxation of the minimum qualifying marks at AP EAPCET-2024 by any candidate claiming as SC/ST Category will be canceled in case the claim is found to be invalid at the time of admission to any course of study at any participating University / Institution.

11. The candidates should preserve the Filled In Online Application Form, the Hall Ticket and the Rank Card to produce them when called for verification.

12. Any malpractice in AP EAPCET-2024 will be dealt with as per rules in force vide G.O.Ms.No: 114, Edn / (IE) Dt: 13th May 1997 for the CET.

13. In any litigation concerning AP EAPCET-2024 Test, Convener is the person to sue and be sued. The Convener (Examination), AP EAPCET – 2024 is not responsible for the allotment of seats at the time of admissions. The Commissioner of Technical Education, Andhra Pradesh is the Convener for the Admissions.

14. Any litigation concerning AP EAPCET-2024 shall be subject to the jurisdiction of the A.P. High Court, Amaravathi only.

15. HALL TICKET

The candidate should download the Hall Ticket from website <https://cets.apsche.ap.gov.in>.

16. COUNSELLING AND ALLOTMENT OF SEATS

The list of institutions for allotment of candidates with intake in each discipline and category, as per reservations through AP EAPCET – 2024 would be released in the **Information Booklet** for Counseling in due course and the same information would also be released on the website <https://cets.apsche.ap.gov.in>.

IMPORTANT INSTRUCTIONS TO CANDIDATES

1. Material to be brought on the date of examination

Hall Ticket along with Filled in Online Application Form with duly affixed recent color photograph attested by Gazetted Officer (or) Principal of the College where the candidate has studied the qualifying examination. However, the Signature of the candidate and Left Hand Thumb impression in the presence of the Invigilator are to be captured in the respective places provided in the Filled in Online Application form.

2. Other important instructions

- a. Hall ticket issued to the candidate is an important document. Candidates are required to preserve it carefully.
- b. Hall ticket is not transferable. Any tampering of Hall Ticket will automatically lead to the disqualification of the candidate
- c. Candidates shall arrive at the online examination center 2 hours before commencement of the examination. This will enable the candidate to familiarize himself/herself with the online examination process.
- d. A candidate is not allowed even late by One Minute from the commencement of the online examination.
- e. The candidate does not have the option of choosing a specific date/session to appear for the AP EAPCET- 2024 entrance examination. This information is known to him/her only after downloading Hall Ticket. For any reason, if the candidate fails to appear in the given slot, he/she is treated as absent.
- f. Candidates are required to bring the following to the online examination center:
 - i) Hall Ticket, ii) Filled in Online Application Form, iii) A good Ball Point Pen (for rough work, working sheets will be provided by the Test Centre) and iv) **Attested copy** of Caste certificate (**in case of SC/ST category candidates only**).
- g. Candidates are not allowed to carry any textual material, Calculators, DocuPen, Slide Rules, Log Tables, Electronic Watches with facilities of calculator, printed or written material, bits of papers, mobile phone, pager or any other device, except the Hall Ticket, document as required under point no. 2.(f) inside the Examination Room/Hall. If any candidate is in possession of any of the above items, his/her candidature will be treated as an unfair means and his/her current examination will be canceled & he/she will also be debarred for future examination(s) & the equipment will be seized.

GUIDELINES TO CANDIDATES

1. Please check the Hall ticket carefully for your Name, Date of Birth, Gender, Category, Test Centre Name, Date, and Time of examination.
2. Candidates are advised to reach the venue at least 2 hours before the examination to complete the frisking and registration formalities well before the time. The registration desk will be closed 05 minutes before the examination.
3. The candidate must show, on demand, the Hall Ticket for admission in the examination room/hall. A candidate who does not possess the Hall Ticket issued by the Convener, AP EAPCET-2024, shall not be permitted for the examination under any circumstances by the Centre Superintendent.
4. No candidate, under any circumstances, will be allowed to enter the Examination Centre after the commencement of the examination.
5. A seat indicating the Hall Ticket number will be allocated to each candidate. Candidates should find out and occupy their allotted seats only. Any candidate found to have changed room or the seat on his/her own other than allotted, his/her candidature shall be canceled and no plea would be accepted for it.
6. The candidate should ensure that the question paper is available on the computer in English and Telugu languages only.
7. No Candidate will be allowed to carry any baggage inside the Examination Centre. The Convener, AP EAPCET-2024 will not be responsible for any belongings stolen or lost at the premises.
8. Smoking and eating are strictly prohibited in the examination room.
9. Tea, coffee, cool drinks, or snacks are not allowed to be taken into the examination rooms during examination hours.
10. Approach the Centre Superintendent/Invigilator in the room for any technical assistance, first aid emergency, or any other information during the examination.
11. No candidate, without the special permission of the Centre Superintendent or the Invigilator concerned, will leave his/her seat or Examination Room until the full duration of the Examination. Candidates must follow the instructions strictly as instructed by the Centre Superintendent/Invigilators.
12. For any queries or issues regarding computer-based examination, the candidates may contact helpline numbers which will be available on the <https://cets.apsche.ap.gov.in> website.

INSTRUCTIONS FOR ONLINE (COMPUTER BASED) EXAMINATION

The On-Line (Computer Based) Examination will be conducted as per the schedule.

1. The test will start exactly at the time mentioned in the Hall Ticket and an announcement to this effect will be made by the invigilator.
2. The Entrance test is conducted for a duration of 3 hours and the question paper consists of a total of 160 questions comprising 80 questions in Mathematics, 40 questions in Physics, and 40 questions in Chemistry. All questions are having equal weightage.
3. There is only one correct response for each question out of four responses given.
4. There is no negative marking and No deduction from the total score will be made if no response is indicated for a question.
5. All calculations/writing work is to be done only in the rough sheet provided at the center and on completion of the test, candidates must hand over the rough sheets to the invigilator on duty in the Room/Hall. The candidates shall write their Hall Ticket number on the rough sheets used by them.
6. During the examination time, the invigilator will check the Hall ticket of the candidate to satisfy himself/herself about the identity of each candidate.
7. The candidates are governed by all Rules and Regulations of the Convener, EAPCET-2024 with regard to their conduct in the Examination Hall. All cases of unfair means will be dealt with as per rules.
8. The candidates must sign and give his/her Left Hand Thumb impression on the Attendance Sheet at the appropriate place.

The following Proforma I, II and III are to be submitted at the time of counseling to claim nativity, community and local status.

PROFORMA – I

**REVISED PROFORMA AS PER G.O.Ms.No.58, SOCIAL WELFARE (J) DEPT.
DATED 12.05.1997 ANDHRA PRADESH GAZETTE EXTRAORDINARY PART-I
Serial No. FORM III**

S.C. District Code :
S.T. Emblem Mandal Code:
B.C. Village Code:

Certificate No.:

**COMMUNITY, NATIVITY AND DATE OF BIRTH CERTIFICATE
(Integrated Community Certificate)**

1. This is to Certify that Sri / Smt / Kum _____
Son / Daughter of Sri _____ of village /Town
_____Mandal _____ District of the state of Andhra Pradesh /
Telangana belongs to _____ Community which was recognized as
SC/ST/BC under

The Constitution (Scheduled Caste) Order, 1950

The Constitution (Scheduled Tribes) Order, 1950

G.O.Ms.No.1793, Education, dated 25.09.1970 as amended from time to time BCs, SCs, STs
list (Modification) Order 1956, SCs and STs (Amendment) Act, 1976.

2. It is to certify that Sri / Smt / Kum _____ is a native of _____
the District of Andhra Pradesh / Telangana

3. It is to certify that the date of birth of Sri / Smt / Kum _____ is
Day _____ Month _____ Year _____ (in words
_____)

as per the declaration given by his /her Father / Mother / Guardian and as entered in the
school records where he/she studied

(Seal)

Signature

Date

Name in Capital letters:

Designation:

Explanatory Note:

1) While mentioning the community, the competent Authority must mention the sub-caste (in case of SCs) and Sub-Tribe or Sub- Group (in case of STs) as listed out in the SCs and STs (Amendment) Act, 1976.

PROFORMA – II

RESIDENCE CERTIFICATE IN SUPPORT OF APPLICATION

1. It is hereby certified

a. That Sri/Smt / Kum_____ son/daughter of Sri / Smt._____ a candidate for admission to the course appeared for the first time for the _____ examination (being the minimum qualifying examination for admission to the course mentioned above) in _____(month) _____(year).

b. That in the 7 years, immediately preceding the commencement of the aforesaid examination he/she has resided in the following place/places falling within the area in respect of the AU/OU/SVU region (Tick appropriate one).

S.No.	Period	Village	Mandal	District
1				
2				
3				
4				
5				
6				
7				

2. The above candidate is, therefore, a local candidate in relation to the area specified in Paragraph 3(1)(2)(3) of the Andhra Pradesh Educational Institution (Regulation of Admissions) Order 1974 as amended.

Officer of the Revenue Department

(Issued by the competent authority of Revenue Dept.)

Date:

(OFFICE SEAL)

PROFORMA – III

CERTIFICATES IN SUPPORT OF NON-LOCAL STATUS FOR E – CATEGORY

(A) Certificate to be furnished when the candidate has resided in the state for a period of 10 years (Read Instructions under 3(a) of Annexure (III) of Instruction Booklet of admission)

This is to certify that Mr./Kum. _____

Son / Daughter of Sri. / Smt. _____

a candidate seeking admission into professional courses (Engineering stream & Agricultural and Pharmacy stream) through AP EAPCET 2024 for the Academic Year 2024-25 is a resident of _____(Place) in _____(District) of Andhra Pradesh / Telangana for a total period of 10 years from the year _____ to _____ excluding the periods of study outside the state.

Place:

Signature of the Competent

Date:

Authority from Revenue Dept.

Office Seal:

(B) Certificate to be furnished when either of the parents of the candidate has resided in the state for a period of 10 years. (Read Instructions under 3(b) of Annexure (III) of Instruction Booklet of admission)

This is to certify that Sri/Smt. _____,

Father / Mother of _____

a candidate seeking admission into professional courses (Engineering stream & Agricultural and Pharmacy stream) through AP EAPCET 2024 for the Academic Year 2024-25, is a resident of _____(Place) in _____(District) of Andhra Pradesh / Telangana for a total period of 10 years from the year _____ to _____ excluding the periods of study outside the state.

Place:

Signature of the Competent

Date:

Authority from Revenue Dept.

Office Seal:

(C) Certificate to be furnished when the parent/ spouse is an employee of the State or Central Government or Quasi-Government Organization.

(Read Instructions under 3(c) and 3(d) of Annexure (III) of Instruction Booklet of admission)

This is to certify that Sri/Smt. _____

Father / Mother of _____

a candidate seeking admission into professional courses (Engineering stream & Agricultural and Pharmacy stream) through AP EAPCET 2024 for the Academic Year 2024-25, is presently employed in Andhra Pradesh State in the Organization from _____ till to-date. This Organization is a State / Central / Quasi Government Organization in the State of Andhra Pradesh / Telangana.

Place:

Signature of the Competent

Date:

Authority from Revenue Dept.

Office Seal:

ANNEXURE - I

AP EAPCET – 2024 SYLLABUS

NOTE:

- ❖ The details of the syllabus in which the exam will be conducted are furnished below for the convenience of students.
- ❖ The syllabus is applicable to students of both the current and previous batches of Intermediate Course, who desire to appear for AP EAPCET-2024.

APEAPCET 2024 - MATHEMATICS SYLLABUS

SUBJECT: MATHEMATICS

ALGEBRA

- a) **Functions:** Types of functions – Definitions - Inverse functions & Theorems - Domain, Range and Inverse.
- b) **Mathematical Induction:** Principles of Mathematical Induction & Theorems – Applications of Mathematical Induction – Problems on divisibility.
- c) **Matrices:** Types of matrices - Scalar multiple of a matrix and multiplication of matrices - Transpose of a matrix – Determinants - properties of determinants - Adjoint and Inverse of a matrix – Consistency and inconsistency of system of simultaneous equations - Rank of a matrix - Solution of simultaneous linear equations.
- d) **Complex Numbers:** Complex number as an ordered pair of real numbers- fundamental operations - Representation of complex numbers in the form $a+ib$ - Modulus and amplitude of complex numbers–Illustrations - Geometrical and Polar Representation of complex numbers in Argand plane-Argand diagram.
- e) **De Moivre’s Theorem:** De Moivre’s theorem- Integral and Rational indices - n^{th} roots of unity- Geometrical Interpretations–Illustrations.
- f) **Quadratic Expressions:** Quadratic expressions, equations in one variable - Sign of quadratic expressions – Change in signs – Maximum and minimum values - Quadratic Inequations.
- g) **Theory of Equations:** The relation between the roots and coefficients in an equation - Solving an equations when two or more roots of it are connected by certain relation - Equation with real coefficients, occurrence of complex roots in conjugate pairs and its consequences, Transformation of equations- Reciprocal equations.
- h) **Permutations and Combinations:** Fundamental Principle of counting – linear and circular permutations- Permutations of ‘n’ dissimilar things taken ‘r’ at a time - Permutations when repetitions allowed - Circular permutations - Permutations with constraint repetitions - Combinations-definitions, certain theorems.
- i) **Binomial Theorem:** Binomial theorem for positive integral index, Binomial theorem for rational Index - Approximations using Binomial theorem
- j) **Partial fractions:** Partial fractions of $f(x)/g(x)$ when $g(x)$ contains non –repeated linear factors - Partial fractions of $f(x)/g(x)$ where both $f(x)$ and $g(x)$ are polynomials and when $g(x)$ contains repeated and/or non-repeated linear factors - Partial fractions of $f(x)/g(x)$ when $g(x)$ contains irreducible factors.

TRIGONOMETRY

- a) **Trigonometric Ratios upto Transformations:** Trigonometric ratios – Variation - Graphs and Periodicity of Trigonometric functions - Trigonometric ratios of Compound angles - Trigonometric ratios of multiple and sub- multiple angles - Transformations - Sum and Product rules.
- b) **Trigonometric Equations:** General solutions of Trigonometric Equations – Simple Trigonometric Equations – Solutions.
- c) **Inverse Trigonometric Functions:** To reduce a Trigonometric function into a bijective function – Graphs of Inverse Trigonometric functions – Properties of Inverse Trigonometric functions.

- d) **Hyperbolic Functions:** Definition of Hyperbolic Function – Graphs - Definition of Inverse Hyperbolic Functions – Graphs - Addition formulae of Hyperbolic Functions.
- e) **Properties of Triangles:** Relation between sides and angles of a Triangle - Sine, Cosine, Tangent and Projection rules- Half angle formulae and areas of a triangle – Incircle and Excircles of a Triangle.

VECTOR ALGEBRA

- a) **Addition of Vectors:** Vectors as a triad of real numbers - Classification of vectors - Addition of vectors - Scalar multiplication - Angle between two non-zero vectors - Linear combination of vectors - Components of a vector in three dimensions - Vector equations of line and plane including their Cartesian equivalent forms.
- b) **Product of Vectors:** Scalar or dot product of two vectors - Geometrical Interpretations - orthogonal projections - Properties of dot product - Expression of dot product in i, j, k system - Angle between two vectors - Geometrical Vector methods – Vector equations of plane in normal form-Angle between two planes- Vector product of two vectors and properties- Vector product in i, j, k system- Vector Areas – Scalar triple product – Vector equation of a plane – different forms, skew lines, shortest distance – plane, condition for coplanarity etc. – vector triple product – results.

MEASURES OF DISPERSION AND PROBABILITY

- a) **Measures of Dispersion** - Range - Mean deviation - Variance and standard deviation of ungrouped/grouped data, coefficient of variation and analysis of frequency distributions with equal means but different variances.
- b) **Probability:** Random experiments and events - Classical definition of probability, Axiomatic approach and addition theorem of probability - Independent and dependent events - conditional probability- multiplication theorem and Baye's theorem.
- c) **Random Variables and Probability Distributions:** Random Variables - Theoretical discrete distributions – Binomial and Poisson Distributions.

COORDINATE GEOMETRY

- a) **Locus:** Definition of locus –Illustrations-To find equations of locus-Problems connected to it.
- b) **Transformation of Axes:** Transformation of Axes – Rules, derivations and illustrations – Rotation of Axes – Derivations – Illustrations.
- c) **The Straight Line:** Revision of fundamental results - Straight line - Normal form – Illustrations - Straight line - Symmetric form - Straight line - Reduction into various forms - Intersection of two Straight Lines - Family of straight lines - Concurrent lines - Condition for Concurrent lines - Angle between two lines - Length of perpendicular from a point to a Line - Distance between two parallel lines - Concurrent lines - properties related to a triangle.
- d) **Pair of Straight lines:** Equations of pair of lines passing through origin - angle between a pair of lines - Condition for perpendicular and coincident lines, bisectors of angles - Pair of bisectors of angles - Pair of lines - second degree general equation - Conditions for parallel lines - distance between them, Point of intersection of pair of lines - Homogenising a second degree equation with a first degree equation in x and y.
- e) **Circle :** Equation of circle -standard form-centre and radius - Equation of a circle with a given line segment as diameter & equation of circle through three non collinear points - parametric equations of a circle - Position of a point in the plane of a circle – power of a point-definition of tangent-length of tangent - Position of a straight line in the plane of a circle-conditions for a line to be tangent – chord joining two points on a circle – equation of the tangent at a point on the

circle- point of contact-equation of normal-Chord of contact-pole and polar-conjugate points and conjugate lines- equation of chord with given middle point, Relative position of two circles- circles touching each other externally, internally common tangents –centers of similitude- equation of pair of tangents from an external point.

- f) **System of circles:** Angle between two intersecting circles –condition for orthogonality - Radical axis of two circles- properties- Common chord and common tangent of two circles – radical centre - Intersection of a line and a Circle.
- g) **Parabola:** Conic sections –Parabola- equation of parabola in standard form-different forms of parabola- parametric equations, Equations of tangent and normal at a point on the parabola (Cartesian and Parametric)- conditions for straight line to be a tangent.
- h) **Ellipse:** Equation of ellipse in standard form- Parametric equations, Equation of tangent and normal at a point on the ellipse (Cartesian and parametric)- condition for a straight line to be a tangent.
- i) **Hyperbola:** Equation of hyperbola in standard form- Parametric equations - Equations of tangent and normal at a point on the hyperbola (Cartesian and parametric) - conditions for a straight line to be tangent-Asymptotes.
- j) **Three Dimensional Coordinates:** Coordinates - Section formulae - Centroid of a triangle and tetrahedron.
- k) **Direction Cosines and Direction Ratios:** Direction Cosines –Direction Ratios.
- l) **Plane:** Cartesian equation of a Plane –Simple Illustrations.

CALCULUS

- a) **Limits and Continuity:** Intervals and neighborhoods – Limits - Standard Limits–Continuity.
- b) **Differentiation:** Derivative of a function - Elementary Properties - Trigonometric, Inverse Trigonometric, Hyperbolic, Inverse Hyperbolic Function – Derivatives - Methods of Differentiation – Second Order Derivatives.
- c) **Applications of Derivatives:** Errors & Approximations - Geometrical Interpretation of a derivative - Equations of tangents and normal to a curve – Lengths of Tangent, Normal, Subtangent and subnormal - Angles between two curves and condition for orthogonality of curves – Derivative as a rate of change – Rolle’s theorem and Lagrange’s Mean value theorem - Increasing and decreasing functions - Maxima and Minima.
- d) **Integration:** Integration as the inverse process of differentiation- Standard forms -properties of integrals - Method of substitution- integration of Algebraic, exponential, logarithmic, trigonometric and inverse trigonometric functions - Integration by parts – Integration by the method of substitution – Integration of algebraic and trigonometric functions – Integration by parts – Integration of exponential, logarithmic and inverse trigonometric functions – Integration - Partial fractions method – Reduction formulae.
- e) **Definite Integrals:** Definite Integral as the limit of sum, Interpretation of Definite Integral as an area. Fundamental theorem of Integral Calculus. Properties, Reduction formulae, Application of Definite integral to areas.
- f) **Differential equations:** Formation of differential equation-Degree and order of an ordinary differential equation - Solving differential equation by i) Variables separable method, ii) Homogeneous differential equation, iii) Non Homogeneous differential equation iv) Linear differential equations

APEAPCET 2024 - PHYSICS SYLLABUS

SUBJECT: PHYSICS

1. PHYSICAL WORLD: What is physics? Scope and excitement of physics. Physics, technology and society, Fundamental forces in nature, Nature of physical laws

2. UNITS AND MEASUREMENTS: The international system of units, Measurement of Length, Measurement of Large Distances, Estimation of Very Small Distances, Size of a Molecule, Range of Lengths, Measurement of Mass, Range of Masses, Measurement of time, Accuracy, precision of instruments and errors in measurement, Systematic errors, random errors, least count error, Absolute Error, Relative Error and Percentage Error, Combination of Errors, Significant figures, Rules for Arithmetic Operations with Significant Figures, Rounding off the Uncertain Digits, Rules for Determining the Uncertainty in the Results of Arithmetic Calculations, Dimensions of Physical Quantities, Dimensional Formulae and dimensional equations, Dimensional Analysis and its Applications, Checking the Dimensional Consistency of Equations, Deducing Relation among the Physical Quantities.

3. MOTION IN A STRAIGHT LINE: Position, path length and displacement, average velocity and average speed, instantaneous velocity and speed, acceleration, kinematic equations for uniformly accelerated motion, relative velocity.

4. MOTION IN A PLANE: Scalars and vectors, position and displacement vectors, equality of vectors, multiplication of vectors by real numbers, addition and subtraction of vectors - graphical method, resolution of vectors, vector addition - analytical method, motion in a plane, position vector and displacement, velocity, acceleration, motion in a plane with constant acceleration, relative velocity in two dimensions, projectile motion, equation of path of a projectile, time of maximum height, maximum height of a projectile, horizontal range of projectile, uniform circular motion.

5. LAWS OF MOTION: Aristotle's fallacy, Laws of inertia, Newton's first law of motion, Newton's second law of motion- momentum, impulse, Newton's third law of motion, conservation of momentum, Equilibrium of a particle, Common forces in mechanics, friction, types of friction, static, kinetic and rolling frictions, Circular motion, Motion of a car on a level road, Motion of a car on a banked road, solving problems in mechanics.

6. WORK, ENERGY AND POWER: The Scalar Product, Notions of work and kinetic energy, The work-energy theorem, Work, Kinetic energy, Work done by a variable force, The work-energy theorem for a variable force, The concept of Potential Energy, The conservation of Mechanical Energy, The Potential Energy of a spring, Various forms of energy, Heat, Chemical Energy, Electrical Energy, The Equivalence of Mass and Energy, Nuclear Energy, The Principle of Conservation of Energy, Power, Collisions, Elastic and Inelastic Collisions, Collisions in one dimension, Coefficient of Restitution and its determination, Collisions in Two Dimensions.

7. SYSTEM OF PARTICLES AND ROTATIONAL MOTION: Rigid body motion, Centre of mass, Centre of Gravity, Motion of centre of mass, Linear momentum of a system of particles, Vector product of two vectors, Angular velocity and its relation with linear velocity, Angular acceleration, Kinematics of rotational motion about a fixed axis, Moment of force (Torque), Angular momentum of particle, Torque and angular momentum for a system of a particles - conservation of angular momentum, Equilibrium of a rigid body, Principle of moments, Moment of inertia, Dynamics of rotational motion about a fixed axis, Angular momentum in case of rotation about a fixed axis - conservation of angular momentum, Rolling motion, Kinetic Energy of Rolling Motion.

8. OSCILLATIONS: Periodic and oscillatory motions, Period and frequency, Displacement, Simple harmonic motion (S.H.M.), Simple harmonic motion and uniform circular motion, Velocity and acceleration in simple harmonic motion, Force law for Simple harmonic Motion, Energy in simple harmonic motion, some systems executing Simple Harmonic Motion, Oscillations due to a spring, The Simple Pendulum, damped simple harmonic motion, Forced oscillations and resonance.

9. GRAVITATION: Kepler's laws, Universal law of gravitation, central forces, the gravitational constant, Acceleration due to gravity of the earth, Acceleration due to gravity below and above the surface of earth, Gravitational potential energy, Escape speed, Orbital Speed, Earth satellites, Energy of an orbiting satellite, Geostationary and polar satellites, Weightlessness.

10. MECHANICAL PROPERTIES OF SOLIDS: Elastic behavior of solids, Stress and strain, Hooke's law, Stress-strain curve, Elastic moduli, Young's Modulus, Determination of Young's Modulus of the Material of a Wire, Shear Modulus, Bulk Modulus, Poisson's ratio, Elastic potential energy in a stretched wire, Applications of elastic behavior of materials.

11. MECHANICAL PROPERTIES OF FLUIDS: Pressure, Pascal's Law, Variation of Pressure with Depth, Atmospheric Pressure and Gauge Pressure, Hydraulic Machines, Archimedes' Principle, Streamline flow, Bernoulli's principle, Speed of Efflux, Torricelli's Law, Venturi-meter, Blood Flow and Heart Attack, Dynamic Lift, Viscosity, Variation of Viscosity of fluids with temperature, Stokes' Law, Reynolds number, Critical Velocity, Surface tension and Surface Energy, Angle of Contact, Drops and Bubbles, Capillary Rise, Detergents and Surface Tension.

12. THERMAL PROPERTIES OF MATTER: Temperature and heat, Measurement of temperature, Ideal-gas equation and absolute temperature, Thermal expansion, Specific heat capacity, Calorimetry, Change of state, Triple Point, Regelation, Latent Heat, Heat transfer – Conduction, convection and radiation, Black body Radiation, Greenhouse Effect, Newton's law of cooling and its experimental verification.

13. THERMODYNAMICS: Thermal equilibrium, Zeroth law of thermodynamics, Heat, Internal Energy and work, First law of thermodynamics, Specific heat capacity, Specific heat capacity of water, Thermodynamic state variables and equation of State, Thermodynamic processes, Quasi-static process, Isothermal Process, Adiabatic Process, Isochoric Process, Isobaric process, Cyclic process, Heat engines, Refrigerators and heat pumps, Second law of thermodynamics, Reversible and irreversible processes, Carnot engine, Carnot's theorem.

14. KINETIC THEORY: Molecular nature of matter, Behaviour of gases, Boyle's Law, Charles' Law, Kinetic theory of an ideal gas, Pressure of an Ideal Gas, Kinetic interpretation of temperature, Law of equipartition of energy, Specific heat capacity, Monatomic Gases, Diatomic Gases, Polyatomic Gases, Specific Heat Capacity of Solids, Specific Heat Capacity of Water, Mean free path.

15. WAVES: Transverse and longitudinal waves, wave displacement relation in a progressive wave, amplitude and phase, wavelength and angular wave number, period, angular frequency and frequency, the speed of a travelling wave, speed of a transverse wave on stretched string, speed of a longitudinal wave (speed of sound), the principle of superposition of waves, reflection of waves, standing waves and normal modes, beats, Doppler effect – source moving & Observer stationary, observer moving and source stationary, both observer and source are moving, applications of Doppler effect.

16. RAY OPTICS AND OPTICAL INSTRUMENTS: Reflection of Light by Spherical Mirrors, Sign convention, Focal length of spherical mirror, Mirror equation, refraction, total internal reflection, total internal reflection in nature and its technological applications, refraction at spherical surfaces and by lenses, power of a lens, combination of thin lenses in contact, refraction through a prism, dispersion by a prism, natural phenomena due to sunlight – Rainbow, Scattering of light, optical instruments, the eye, the simple and compound microscopes, refracting telescope and Cassegrain reflecting telescope.

17. WAVE OPTICS: Huygens principle, refraction and reflection of plane waves using Huygens principle, refraction in a rarer medium (at the denser medium boundary), reflection of a plane wave by a plane surface, the Doppler effect, coherent and incoherent addition of waves, interference of light waves and Young's experiment, Diffraction, Single slit, resolving power of optical instruments, the validity of ray optics, Polarization by scattering, Polarisation by reflection, plane polarized light, polaroids

18. ELECTRIC CHARGES AND FIELDS: Electric charge, conductors and insulators, charging by induction, basic properties of electric charges, additivity of charges, conservation of charge, quantization of charge, Coulomb's law, forces between multiple charges, electric field, electric field due to a system of charges, physical significance of electric field, electric field lines, electric flux, electric dipole, the field of an electric dipole for points on the axial line and on the equatorial plane, physical significance of dipoles, dipole in a uniform external field, continuous charge distribution, Gauss's law, Applications of Gauss's Law infinitely long straight uniformly charged wire, infinite plane sheet, field due to uniformly charged thin spherical shell.

19. ELECTROSTATIC POTENTIAL AND CAPACITANCE: Electrostatic potential, potential due to a point charge, potential due to an electric dipole, potential due to a system of charges, equipotential surfaces, relation between field and potential, potential energy of a system of charges, potential energy in an external field, potential energy of a single charge, potential energy of a system of two charges in an external field, potential energy of a dipole in an external field, electrostatics of conductors, dielectrics and polarisation, electric displacement, capacitors and capacitance, the parallel plate capacitor, effect of dielectric on capacitance, combination of capacitors, capacitors in series, capacitors in parallel, energy stored in a capacitor, Van de Graaff generator.

20. CURRENT ELECTRICITY: Electric current, electric current in conductors, Ohm's law, drift of electrons and the origin of resistivity, mobility, limitations of Ohm's law, resistivity of various materials, colour code of resistors, Temperature dependence of resistivity, electrical energy, power. Combination of Resistors, Series and Parallel, Cells, EMF, internal resistance, cells in series and in parallel, Kirchhoff's rules, Wheatstone Bridge, Meter Bridge, Potentiometer.

21. MOVING CHARGES AND MAGNETISM: Magnetic force, sources and fields, magnetic field, Lorentz force, magnetic force on a current carrying conductor, motion in a magnetic field, helical motion of charged particles, motion in combined electric and magnetic fields, velocity selector, cyclotron, magnetic field due to a current element, Biot – Savart's law, Magnetic field on the axis of a circular current loop, Ampere's circuital law, the solenoid and the toroid, force between two parallel current carrying conductors, the ampere (UNIT), torque on current loop, magnetic dipole, torque on a rectangular current loop in a uniform magnetic field, circular current loop as a magnetic dipole, the magnetic dipole moment of a revolving electron, the Moving Coil Galvanometer; conversion into ammeter and voltmeter.

22. MAGNETISM AND MATTER: The bar magnet, the magnetic field lines, bar magnet as an equivalent solenoid, The dipole in a uniform magnetic field, the electrostatic analog, Magnetism and Gauss's Law, The Earth's magnetism, magnetic declination and dip, magnetization and magnetic

intensity, magnetic properties of materials – Diamagnetism, Paramagnetism and Ferromagnetism, permanent magnets and electromagnets.

23. ELECTROMAGNETIC INDUCTION: The experiments of Faraday and Henry, magnetic flux, Faraday's Law of induction, Lenz's law and conservation of energy, motional electromotive force, energy consideration - a quantitative study, Eddy currents, inductance, mutual inductance, self-inductance, AC generator.

24. ALTERNATING CURRENT: AC voltage applied to a resistor, representation of AC current and voltage by rotating vectors - Phasors, AC voltage applied to an inductor, AC voltage applied to a capacitor, AC voltage applied to a series LCR circuit, Phasor – diagram solution, analytical solution, resonance, sharpness of resonance, Power in AC circuit: The power factor, Wattless current LC oscillations, transformers.

25. ELECTROMAGNETIC WAVES: Displacement Current, Maxwell's equations, electromagnetic waves, sources of electromagnetic waves, nature of electromagnetic waves, electromagnetic spectrum: radio waves, microwaves, infrared waves, visible rays, ultraviolet rays, X-rays, gamma rays.

26. DUAL NATURE OF RADIATION AND MATTER: Electron emission, Photoelectric Effect, Hertz's observations, Hallwachs and Lenard's observations, experimental study of photoelectric effect, effect of intensity of light on photocurrent, effect of potential on photoelectric current, effect of frequency of incident radiation on stopping potential, Photoelectric effect and Wave theory of Light, Einstein's Photoelectric equation, Energy Quantum of Radiation, particle nature of light, the photon, wave nature of matter, photocell, Davisson and Germer Experiment

27. ATOMS: Alpha particle scattering and Rutherford's nuclear model of atom, alpha particle trajectory, electron orbits, atomic spectra, spectral series, Bohr model of the hydrogen atom, energy levels, Franck – Hertz experiment, the line spectra of the hydrogen atom, deBroglie's explanation of Bohr's second postulate of quantization.

28. NUCLEI: Atomic masses and composition of nucleus, discovery of neutron, size of the nucleus, Mass - Energy, Nuclear Binding Energy, Binding energy of Nucleon and its variation with Mass Number, Nuclear Force, Radioactivity - Law of radioactive decay, half life and mean life of a Radioactive material, Alpha decay, Beta decay and Gamma decay, Nuclear Energy, Fission, Nuclear reactor, nuclear fusion, energy generation in stars, controlled thermonuclear fusion.

29. SEMICONDUCTOR ELECTRONICS: MATERIALS, DEVICES AND SIMPLE CIRCUITS: Classification of metals, conductors, and semiconductors on the basis of conductivity and energy bands, Band theory of solids, Intrinsic semiconductor, Extrinsic semiconductor, p-type semiconductor, n-type semiconductor, p-n junction, forward bias, reverse bias, Semiconductor diode, Application of junction diode as a rectifier, Zener Diode, Zener Diode as a voltage regulator, Optoelectronic junction devices, Photodiode, light emitting diode, solar cell. Junction transistor, structure and action, Basic transistor circuit configurations and transistor characteristics, transistor as a switch and as an amplifier (CE – Configuration), Feedback amplifier and transistor oscillator, Digital Electronics and Logic gates, NOT, OR, AND, NAND and NOR Gates, Integrated circuits.

30. COMMUNICATION SYSTEMS: Elements of a Communication system, basic terminology used in electronic communication systems, bandwidth of signals, bandwidth of transmission medium, propagation of electromagnetic waves, ground waves, sky waves, space wave, modulation and its necessity, size of the antenna or aerial, effective power radiated by an antenna, mixing up of signals from different transmitters, amplitude modulation, production of amplitude modulated wave, detection of amplitude modulated wave.

APEAPCET 2024 - CHEMISTRY SYLLABUS

SUBJECT: CHEMISTRY

Unit-1: ATOMIC STRUCTURE: Sub Atomic particles, Atomic models, Developments to the Bohr's model of atom; Wave nature of electromagnetic radiation; Particle nature of electromagnetic radiation, Planck's quantum theory; Evidence for the quantized electronic Energy levels : Atomic spectra, Bohr's model for Hydrogen atom; Explanation of line spectrum of hydrogen; Limitations of Bohr's model; Quantum mechanical considerations of sub atomic particles; Dual behaviour of matter; Heisenberg's uncertainty principle; Quantum mechanical model of an atom. Important features of Quantum mechanical model of atom; Orbitals and quantum numbers; Shapes of atomic orbitals; Energies of orbitals; Filling of orbitals in atoms. Aufbau Principle, Pauli's exclusion Principle and Hund's rule of maximum multiplicity; Electronic configurations of atoms; Stability of half-filled and completely filled orbitals.

Unit-2: CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES: Genesis of periodic classification, Modern periodic law and present form of the periodic table; Nomenclature of elements with atomic number greater than 100; Electronic configuration of elements and the periodic table; Electronic configuration and types of elements s, p, d and f blocks; Trends in physical properties: (a) Atomic radius, (b) Ionic radius (c) Variation of size in inner transition elements, (d) Ionization enthalpy, (e) Electron gain enthalpy, (f) Electro negativity; Periodic trends in chemical properties: (a) Periodicity of Valence or Oxidation states, (b) Anomalous properties of second period elements –diagonal relationship; Periodic trends and chemical reactivity.

Unit-3: CHEMICAL BONDING AND MOLECULAR STRUCTURE: Kossel - Lewis approach to chemical bonding, Octet rule, Lewis representation of simple molecules, formal charges, limitations of octet rule; Ionic or electrovalent bond - Factors favourable for the formation of ionic compounds- Crystal structure of sodium chloride, Lattice Enthalpy: General properties of ionic compounds; Bond Parameters - bond length, bond angle, and bond enthalpy, bond order, resonance- Polarity of bonds dipole moment-Fajan rules; Valence Shell Electron Pair Repulsion (VSEPR) theory; Predicting the geometry of simple molecules; Valence bond theory-Orbital overlap concept- Directional properties of bonds-overlapping of atomic orbitals- types of overlapping and nature of covalent bonds-strength of sigma and pi bonds-Factors favouring the formation of covalent bonds; Hybridisation- different types of hybridization involving s, p and d orbitals- shapes of simple covalent molecules; Coordinate bond - definition with examples; Molecular orbital theory - Formation of molecular orbitals, Linear combination of atomic orbitals(LCAO)-conditions for combination of atomic orbitals-, Types of Molecular orbitals, Energy level diagrams for molecular orbitals -, Electronic Configuration and Molecular Behaviour, Bonding in some homo nuclear diatomic molecules- H_2 , He_2 , Li_2 , B_2 , C_2 , N_2 and O_2 ; Hydrogen bonding-cause of formation of hydrogen bond - Types of hydrogen bonds-inter and intra molecular-General properties of hydrogen bonds.

Unit-4: STATES OF MATTER: GASES AND LIQUIDS: Intermolecular forces; Thermal Energy; Intermolecular forces Vs Thermal interactions; The Gaseous State; The Gas Laws; Ideal gas equation; Graham's law of diffusion - Dalton's Law of partial pressures; Kinetic molecular theory of gases; Kinetic gas equation of an ideal gas (No derivation) deduction of gas laws from Kinetic gas equation; Distribution of molecular speeds, Kinetic Energy, Behaviour of real gases - Deviation from Ideal gas behaviour - Compressibility factor Vs Pressure diagrams of real gases; Liquefaction of gases, Liquid state, Vapour Pressure, Surface tension, Viscosity.

Unit-5: STOICHIOMETRY: Significant figures, Laws of Chemical Combinations - Law of Conservation of Mass, Law of Definite Proportions, Law of Multiple Proportions, Atomic and molecular masses- mole concept and molar mass. Concept of equivalent weight; Percentage composition of compounds and calculations of empirical and molecular formulae of compounds; Stoichiometry and stoichiometric calculations- limiting reagent; Methods of Expressing concentrations of solutions- mass percent, mole fraction, molarity, molality and normality; Redox reactions-classical idea of redox reactions, oxidation and reduction reactions- redox reactions in terms of electron transfer; Oxidation number concept; Types of Redox reactions- combination, decomposition, displacement and disproportionation reactions; Balancing of redox reactions-oxidation number method Half reaction (ion-electron)method; Redox reactions in titrimetry.

Unit-6: THERMODYNAMICS: Thermodynamic Terms; The system and the surroundings; Types of systems and surroundings; The state of the system; The Internal Energy as a State Function. (a)Work (b) Heat (c) The general case, the first law of Thermodynamics; Applications; Work; Enthalpy, H- a useful new state function; Extensive and intensive properties; The relationship between C_p and C_v ; Measurement of ΔU and ΔH : Calorimetry; Enthalpy change, $\Delta_r H$ of reactions- reaction Enthalpy (a) Standard enthalpy of reactions, (b) Enthalpy changes during transformations, (c) Standard enthalpy of formation, (d) Thermochemical equations (e) Hess's law of constant Heat summation; Enthalpies for different types of reactions. (a) Standard enthalpy of combustion ($\Delta_c H^0$), (b) Enthalpy of atomization ($\Delta_a H^0$), phase transition, sublimation and ionization, (c) Bond Enthalpy ($\Delta_{bond} H^0$), (d) Enthalpy of solution ($\Delta_{sol} H^0$) and dilution-lattice enthalpy; Spontaneity. (a) Is decrease in enthalpy a criterion for spontaneity? (b) Entropy and spontaneity, the second law of thermodynamics, (c) Gibbs Energy and spontaneity; Absolute entropy and the third law of thermodynamics.

Unit-7: CHEMICAL EQUILIBRIUM AND ACIDS-BASES: Equilibrium in Physical process; Equilibrium in chemical process - Dynamic Equilibrium; Law of chemical Equilibrium - Law of mass action and Equilibrium constant; Homogeneous Equilibria, Equilibrium constant in gaseous systems. Relationship between K_p and K_c ; Heterogeneous Equilibria; Applications of Equilibrium constant; Relationship between Equilibrium constant K , reaction quotient Q and Gibbs energy G ; Factors affecting Equilibria.-Le-chatlier principle application to industrial synthesis of Ammonia and Sulphur trioxide; Ionic Equilibrium in solutions; Acids, bases and salts- Arrhenius, Bronsted-Lowry and Lewis concepts of acids and bases; Ionisation of Acids and Bases - Ionisation constant of water and its ionic product- P^H scale-ionisation constants of weak acids-ionisation of weak bases-relation between K_a and K_b -Di and poly basic acids and di and poly acidic Bases-Factors affecting acid strength- Common ion effect in the ionization of acids and bases- Hydrolysis of salts and pH of their solutions, Buffer solutions - Solubility Equilibria of sparingly soluble salts. Solubility product constant Common ion effect on solubility of Ionic salts.

Unit-8: HYDROGEN AND ITS COMPOUNDS: Position of hydrogen in the periodic table; Dihydrogen-Occurrence and Isotopes; Preparation and properties of dihydrogen, uses of H_2 , Hydrides: Ionic, covalent, and non-stoichiometric hydrides; Water: Physical properties; structure of water, ice. Chemical properties of water; hard and soft water, Temporary and permanent hardness of water; Hydrogen Peroxide: Preparation, properties, structure, storage and uses. Heavy Water; Hydrogen as a fuel.

Unit-9: THE s-BLOCK ELEMENTS (ALKALI AND ALKALINE EARTH METALS):

Group 1 Elements :Alkali metals; Electronic configurations; Atomic and Ionic radii; Ionization enthalpy; Hydration enthalpy; Physical properties; Chemical properties; Uses; General characteristics of the compounds of the alkali metals: Oxides; Halides; Salts of oxo Acids; Anomalous properties of Lithium: Differences and similarities with other alkali metals, Diagonal relationship; similarities between Lithium and Magnesium; Some important compounds of Sodium:

Sodium Chloride, Sodium carbonate, Sodium Hydroxide, Sodium Bicarbonate, Biological importance of Sodium and Potassium.

Group 2 Elements: Alkaline earth elements; Electronic configuration; Ionization enthalpy; Hydration enthalpy; Physical properties, Chemical properties; Uses; General characteristics of compounds of the Alkaline Earth Metals: Oxides, hydroxides, halides, salts of oxy acids (Carbonates; Sulphates and Nitrates); Anomalous behavior of Beryllium; its diagonal relationship with Aluminum; Some important compounds of calcium: Preparation and uses of Calcium Hydroxide, Quick lime, Calcium Carbonate, Plaster of Paris; Cement, Biological importance of Calcium and Magnesium.

Unit-10: p- BLOCK ELEMENTS GROUP 13 (BORON FAMILY): General introduction – Electronic configuration, atomic radii, Ionization enthalpy, Electro negativity; Physical & Chemical properties Aluminum reactivity towards acids & alkalis, Important trends and anomalous properties of boron; Some important compounds of Boron- Borax, orthoboric acid, Diborane, Uses of boron, aluminum, and their compounds.

Uni-11: p-BLOCK ELEMENTS - GROUP 14 (CARBON FAMILY): General introduction – Electronic configuration, atomic radii, Ionization enthalpy, Electro negativity; Physical & Chemical properties; Important trends and anomalous properties of carbon; Allotropes of carbon; Uses of carbon; Some important compounds of Carbon and Silicon: Carbon Monoxide, Carbon dioxide, Silica, Silicones, Silicates, Zeolites.

Unit-12: Environmental Chemistry: Definition of terms: Air, Water, Soil Pollutions, Environmental Pollution, Atmospheric Pollution, Acid rain, Particulate pollutants, Stratospheric pollution, Water pollution, Soil pollution, Strategies to control Environmental pollution, Green Chemistry.

Unit-13: ORGANIC CHEMISTRY-SOME BASIC PRINCIPLES AND TECHNIQUES AND HYDRO CARBONS: General introduction; Tetravalency of Carbon: shapes of organic compounds; Structural representations of organic compounds; Classification of organic compounds; Nomenclature of organic compounds; Isomerism; Fundamental concepts in organic reaction mechanisms; Fission of covalent bond; Nucleophiles and electrophiles; Electron movements in organic reactions; Electron displacement effects in covalent bonds: inductive effect, resonance, resonance effect, electromeric effect, hyper conjugation; Types of Organic reactions; Methods of purification of Organic compounds, Qualitative elemental analysis of Organic compounds, Quantitative elemental analysis.

Hydrocarbons: Classification of Hydrocarbons; **Alkanes** - Nomenclature, isomerism (structural and conformations of ethane only); Preparation of alkanes; Properties - Physical properties and chemical Reactivity, Substitution reactions – Halogenation, Controlled Oxidation, Isomerisation, Aromatization, and reaction with steam; **Alkenes**- Nomenclature, structure of ethene, Isomerism; Methods of preparation; Properties-Physical and chemical reactions: Addition of dihydrogen, halogen, water, Sulphuric acid, Hydrogen halides (Mechanism- ionic and peroxide effect, Markovnikov's, anti-Markovnikov's or Kharasch effect). Oxidation, Ozonolysis and Polymerization; **Alkynes** - Nomenclature and isomerism, structure of acetylene. Methods of preparation of acetylene; Physical properties, Chemical reactions- acidic character of alkyne, addition reactions-of hydrogen, Halogen, Hydrogen halides and water. Polymerization; **Aromatic Hydrocarbons:** Nomenclature and isomerism, Structure of benzene, Resonance and aromaticity; Preparation of benzene. Physical properties. Chemical properties: Mechanism of electrophilic substitution. Electrophilic substitution reactions- Nitration, Sulphonation, Halogenation, Friedel-Craft's alkylation and acylation; Directive influence of functional groups in mono substituted benzene, Carcinogenicity and toxicity.

Unit-14: SOLID STATE: General characteristics of solid state; Amorphous and crystalline solids; Classification of crystalline solids based on different binding forces (molecular, ionic, metallic and covalent solids); Probing the structure of solids: X-ray crystallography; Crystal lattices and unit cells. Bravais lattices primitive and centered unit cells; Number of atoms in a unit cell (primitive, body centered and face centered cubic unit cell); Close packed structures: Close packing in one dimension, in two dimensions and in three dimensions- tetrahedral and octahedral voids- formula of a compound and number of voids filled- locating tetrahedral and octahedral voids; Packing efficiency in simple cubic, bcc and in hcp, ccp lattice; Calculations involving unit cell dimensions- density of the unit cell; Imperfections in solids- types of point defects- stoichiometric and non-stoichiometric defects; Electrical properties- conduction of electricity in metals, semiconductors and insulators- band theory of metals; Magnetic properties

Unit-15: SOLUTIONS: Types of solutions; Expressing concentration of solutions- mass percentage, volume percentage, mass by volume percentage, parts per million, mole fraction, molarity and molality; Solubility: Solubility of a solid in a liquid, solubility of a gas in a liquid, Henry's law; Vapour pressure of liquid solutions: vapour pressure of liquid- liquid solutions. Raoult's law as a special case of Henry's law -vapour pressure of solutions of solids in liquids; Ideal and non-ideal solutions; Colligative properties and determination of molar mass- relative lowering of vapour pressure- elevation of boiling point- depression of freezing point- osmosis and osmotic pressure- reverse osmosis and water purification; Abnormal molar masses- van't Hoff factor

Unit-16: ELECTROCHEMISTRY AND CHEMICAL KINETICS:

Electrochemistry: Electrochemical cells; Galvanic cells: measurement of electrode potentials; Nernst equation- equilibrium constant from Nernst equation- electrochemical cell and Gibbs energy of the cell reaction; Conductance of electrolytic solutions- measurement of the conductivity of ionic solutions- variation of conductivity and molar conductivity with concentration- strong electrolytes and weak electrolytes- applications of Kohlrausch's law; Electrolytic cells and electrolysis: Faraday's laws of electrolysis- products of electrolysis; Batteries: primary batteries and secondary batteries, Fuel cells, Corrosion of metals- Hydrogen economy.

Chemical Kinetics: Rate of a chemical reaction; Factors influencing rate of a reaction: dependence of rate on concentration- rate expression and rate constant- order of a reaction, molecularity of a reaction; Integrated rate equations- zero order reactions- first order reactions- half-life of a reaction; Pseudo first order reactions; Temperature dependence of the rate of a reaction -effect of catalyst; Collision theory of chemical reaction rates

Unit-17: SURFACE CHEMISTRY: Adsorption: Distinction between adsorption and absorption- mechanism of adsorption- types of adsorption- characteristics of physisorption- characteristics of chemisorption- adsorption isotherms- adsorption from solution phase- applications of adsorption; Catalysis: Catalysts, promoters and poisons- autocatalysis- homogeneous and heterogeneous catalysis- adsorption theory of heterogeneous catalysis- important features of solid catalysts: (a) activity (b) selectivity- shape-selective catalysis by zeolites- enzyme catalysis- characteristics and mechanism- catalysts in industry

Colloids: Classification of colloids: Classification based on physical state of dispersed phase and dispersion medium- classification based on nature of interaction between dispersed phase and dispersion medium- classification based on type of particles of the dispersed phase- multimolecular, macromolecular and associated colloids- cleansing action of soaps- preparation of colloids- purification of colloidal solutions- properties of colloidal solutions: Colligative properties, Tyndal effect, colour, Brownian movement- charge on colloidal particles, electrophoresis; coagulation- precipitation methods- coagulation of lyophilic sols and protection of colloids- Emulsions; Colloids around us- application of colloids.

Unit-18: GENERAL PRINCIPLES OF METALLURGY: Occurrence of metals; Concentration of ores- levigation, magnetic separation, froth floatation leaching; Extraction of crude metal from concentrated ore-conversion to oxide, reduction of oxide to the metal; Thermodynamic principles of metallurgy-Ellingham diagram-limitations- applications-extraction of iron, copper and zinc from their oxides; Electrochemical principles of metallurgy; Oxidation and reduction; Refining of crude metal-distillation, liquation poling, electrolysis, zone refining and vapour phase refining; Uses of aluminum, copper, zinc and iron

Unit-19: p-BLOCK ELEMENTS: Group-15 Elements: Occurrence-electronic configuration, atomic and ionic radii, ionization enthalpy, electro negativity, physical and chemical properties; Dinitrogen-preparation, properties and uses; Compounds of nitrogen-preparation, properties, and uses of ammonia; Oxides of nitrogen; Preparation and properties of nitric acid; Phosphorous-allotropic forms; Phosphine- preparation and properties; Phosphorous halides; Oxoacids of phosphorous; Phosphorous halides & Oxo acids of phosphorous

Group-16 Elements: Occurrence-electronic configuration, atomic and ionic radii, ionization enthalpy, electron gain enthalpy, electro negativity, physical and chemical properties; Dioxygen-preparation, properties and uses; Simple oxides; Ozone-preparation, properties, structure and uses; Sulphur-allotropic forms; Sulphur dioxide-preparation, properties and uses; Oxoacids of sulphur; Sulphuric acid-industrial process of manufacture, properties and uses.

Group-17 Elements: Occurrence, electronic configuration, atomic and ionic radii, ionization enthalpy, electron gain enthalpy, electronegativity, physical and chemical properties; Chlorine-preparation, properties and uses; Hydrogen chloride- preparation, properties and uses; Oxoacids of halogens; Interhalogen compounds-preparation, properties and uses.

Group-18 Elements: Occurrence, electronic configuration, ionization enthalpy, atomic radii, electron gain enthalpy, physical and chemical properties(a) Xenon-fluorine compounds- XeF_2 , XeF_4 and XeF_6 -preparation, hydrolysis and formation of fluoro anions-structures of XeF_2 , XeF_4 and XeF_6 (b) Xenon-oxygen compounds XeO_3 and XeOF_4 -their formation and structures-uses of noble gases.

Unit-20: d AND f BLOCK ELEMENTS & COORDINATION COMPOUNDS: d and f block elements: Position in the periodic table; Electronic configuration of the d-block elements; General properties of the transition elements (d-block) -physical properties, variation in atomic and ionic sizes of transition series, ionization enthalpies, oxidation states, trends in the M^{2+}/M and M^{3+}/M^{2+} standard electrode potentials, trends in stability of higher oxidation states, chemical reactivity and E^θ values, magnetic properties, formation of coloured ions, formation of complex compounds, catalytic properties, formation of interstitial compounds, alloy formation; Some important compounds of transition elements-oxides and oxo-anions of metals-uses of potassium dichromate and potassium permanganate-structures of chromate, dichromate, manganate and permanganate ions; Inner transition elements(f-block)-lanthanoids-electronic configuration-atomic and ionic sizes-oxidation states- general characteristics; The Actinoids- electronic configurations, ionic sizes, oxidation states, general characteristics and comparison with lanthanoids; Some applications of d and f block elements.

Coordination compounds: Werner's theory of coordination compounds; Definitions of some terms used in coordination compounds; Nomenclature of coordination compounds-IUPAC nomenclature; Isomerism in coordination compounds-(a)Stereo isomerism- Geometrical and optical isomerism (b)Structural isomerism- linkage, coordination, ionization and solvate isomerism

Bonding in coordination compounds. (a)Valence bond theory - magnetic properties of coordination compounds-limitations of valence bond theory (b) Crystal field theory (i) Crystal field splitting in octahedral and tetrahedral coordination entities (ii) Colour in coordination compounds- limitations

of crystal field theory; Bonding in metal carbonyls; Stability of coordination compounds; Importance and applications of coordination compounds.

Unit-21: POLYMERS: Classification of Polymers -Classification based on source, structure, mode of polymerization, molecular forces and growth polymerization; Types of polymerization reactions- addition polymerization or chain growth polymerization- Ionic polymerization, free radical mechanism-preparation of addition polymers- polythene, Teflon and poly acrylonitrile-condensation polymerization or step growth polymerization-polyamides- preparation of Nylon 6,6 and nylon 6-polyesters- terylene- bakelite, melamine, formaldehyde polymer- copolymerization- Rubber- natural rubber-vulcanisation of rubber-Synthetic rubbers- preparation of neoprene and buna-N; Molecular mass of polymers-number average and weight average molecular masses- poly dispersity index(PDI); Biodegradable polymers- poly β -Hydroxy butyrate-Co β -Hydroxy Valerate (PHBV), Nylon 2-nylon 6; Polymers of commercial importance- poly propene, polystyrene, poly vinyl chloride(PVC), urea- formaldehyde resin, glyptal, bakelite- their monomers, structures and uses

Unit-22: BIOMOLECULES: Carbohydrates-Classification of carbohydrates-Monosaccharides: preparation of glucose from sucrose and starch-Properties and structure of glucose-D, L configurations and (+), (-) configurations of glucose-Structure of fructose; Disaccharides: Sucrose-preparation, structure; Invert sugar- Structures of maltose and lactose- Polysaccharides: Structures of starch, cellulose and glycogen- Importance of carbohydrates; Amino acids: Natural amino acids-classification of amino acids-structures and D and L forms-Zwitterions; Proteins-Structures, classification, fibrous and globular- primary, secondary, tertiary and quaternary structures of proteins- Denaturation of proteins;

Enzymes: Enzymes, mechanism of enzyme action; **Vitamins:** Explanation-names- classification of vitamins - sources of vitamins-deficiency diseases of different types of vitamins; **Nucleic acids:** chemical composition of nucleic acids, structures of nucleic acids, DNA fingerprinting biological functions of nucleic acids;

Hormones: Definition, different types of hormones, their production, biological activity, diseases due to their abnormal activities.

Unit-23: CHEMISTRY IN EVERYDAYLIFE- Drugs and their classification: (a) Classification of drugs on the basis of pharmacological effect (b) Classification of drugs on the basis of drug action (c) Classification of drugs on the basis of chemical structure (d) Classification of drugs on the basis of molecular targets; Drug-Target interaction-Enzymes as drug targets (a) Catalytic action of enzymes (b) Drug-enzyme interaction Receptors as drug targets; Therapeutic action of different classes of drugs: antacids, antihistamines, neurologically active drugs: tranquilizers, analgesics-non- narcotic, narcotic analgesics, antimicrobials-antibiotics, antiseptics and disinfectants-antifertility drugs; Chemicals in food- artificial sweetening agents, food preservatives, antioxidants in food; Cleansing agents-soaps and synthetic detergents

Unit-24:HALO ALKANES AND HALO ARENES: Classification and nomenclature; Nature of C-X bond; Methods of preparation: Alkylhalides and arylhalides-from alcohols, from hydrocarbons (a) by free radical halogenation (b) by electrophilic substitution (c) by replacement of diazonium group (Sandmeyer reaction) (d) by the addition of hydrogen halides and halogens to alkenes-by halogen exchange reactions (Finkelstein reaction); Physical properties-melting and boiling points, density and solubility; Chemical reactions: Reactions of haloalkanes (i) Nucleophilic substitution reactions (a) SN^2 mechanism (b) SN^1 mechanism (c) stereo chemical aspects of nucleophilic substitution reactions-optical activity (ii) Elimination reactions (iii) Reaction with metals-Reactions

of haloarenes: (i) Nucleophilic substitution (ii) Electrophilic substitution and (iii) Reaction with metals;

Polyhalogen compounds: Uses and environmental effects of dichloro methane, trichloromethane, triiodomethane, tetrachloro methane, freons and DDT

Unit-25: ORGANIC COMPOUNDS CONTAINING C, H AND O (ALCOHOLS, PHENOLS, ETHERS, ALDEHYDES, KETONES AND CARBOXYLICACIDS):

Alcohols, Phenols and Ethers: Alcohols, phenols and ethers-classification; Nomenclature: (a)Alcohols, (b) phenols and (c) ethers; Structures of hydroxy and ether functional groups; Methods of preparation: Alcohols from alkenes and carbonyl compounds, from Grignard reagents; Phenols from haloarenes, benzene sulphonic acid, diazonium salts, cumene; Physical properties of alcohols and phenols; Chemical reactions of alcohols and phenols (i) Reactions involving cleavage of O-H bond in alcohols-Acidity of alcohols and phenols, esterification (ii) Reactions involving cleavage of C-O bond-reactions with HX, PX_3 , dehydration and oxidation (iii) Reactions of phenols-electrophilic aromatic substitution, Kolbe's reaction, Reimer - Tiemann reaction, reaction with zinc dust, oxidation;

Commercially important alcohols (methanol, ethanol)

Ethers-Methods of preparation: By dehydration of alcohols, Williamson synthesis-Physical properties-Chemical reactions: Cleavage of C-O bond and electrophilic substitution of aromatic ethers (anisole).

Aldehydes and Ketones: Nomenclature and structure of carbonyl group; Preparation of aldehydes and ketones-(1) by oxidation of alcohols (2) by dehydrogenation of alcohols (3) from hydrocarbons -Preparation of aldehydes (1) from acyl chlorides (2) from nitriles and esters (3) from hydrocarbons-Preparation of ketones (1)from acyl chlorides (2) from nitriles (3) from benzene or substituted benzenes; Physical properties of aldehydes and ketones; Chemical reactions of aldehydes and ketones-nucleophilic addition, reduction, oxidation, reactions due to α -Hydrogen and other reactions (Cannizzaro reaction, electrophilic substitution reaction);Uses of aldehydes and ketones.

Carboxylic acids: Nomenclature and structure of carboxyl group; Methods of preparation of carboxylic acids (1) from primary alcohols and aldehydes (2) from alkyl benzenes (3) from nitriles and amides (4) from Grignard reagents (5) from acyl halides and anhydrides (6) from esters; Physical properties; Chemical reactions: (i) Reactions involving cleavage of O-H bond-acidity, reactions with metals and alkalis (ii) Reactions involving cleavage of C-OH bond- formation of anhydride, reactions with PCl_5 , PCl_3 , $SOCl_2$, esterification and reaction with ammonia (iii) Reactions involving-COOH group-reduction, decarboxylation (iv) Substitution reactions in the hydrocarbon part-halogenation and ring substitution; Uses of carboxylic acids.

Unit-26: ORGANIC COMPOUNDS CONTAINING NITROGEN:

Amines: Structure of amines; Classification; Nomenclature; Preparation of amines: reduction of nitro compounds, ammonolysis of alkyl halides, reduction of nitriles, reduction of amides, Gabriel phthalimide synthesis and Hoffmann bromamide degradation reaction; Physical properties; Chemical reactions: basic character of amines, alkylation, acylation, carbyl amine reaction, reaction with nitrous acid, reaction with aryl sulphonyl chloride, electrophilic substitution of aromatic amines (aniline)-bromination, nitration and sulphonation.

DIAZONIUM SALTS- Methods of preparation of diazonium salts (by diazotization); Physical properties; Chemical reactions: Reactions involving displacement of Nitrogen, reactions involving

retention of di azo group –coupling reactions; Importance of diazonium salts in synthesis of aromatic compounds

Cyanides and Isocyanides:

Structure and nomenclature of cyanides and isocyanides; Preparation, physical properties and chemical reactions of cyanides and isocyanide

ANNEXURE – II

MODEL QUESTIONS – MATHEMATICS

- 1) If a point (a,a) falls between the lines $|x+y| = 4$
1) $|a| = 2$ 2) $|a| = 3$ 3) $|a| < 2$ 4) $|a| < 3$
- 2) The variance of 30 observations is 3. If each of the observations is multiplied by 3, then the variance of the resulting observations is :
1) 3 2) 9 3) 27 4) 81
- 3) If the sum of two positive numbers is k , then the sum of their squares will be minimum, when the numbers are
1) $k/4, k/4$ 2) $k/3, k/3$ 3) $k/2, k/2$ 4) k, k
- 4) If the lines $4x+3y-1=0$, $x-y+5=0$ and $kx+5y-3=0$ are concurrent then $k =$
1) 4 2) 5 3) 6 4) 7
- 5) In any ΔABC , $b^2 \sin 2C + c^2 \sin B =$
1) Δ 2) 2Δ 3) 3Δ 4) 4Δ

MODEL QUESTIONS – PHYSICS

1. A particle starts from origin at $t=0$ with a velocity of $10 \mathbf{i}$ m/s and moves in x-y plane under the action of force which produces a constant acceleration of $(2\mathbf{i} + 3\mathbf{j})$ m/s². The y – coordinate in meters of the particle at the instant its x-coordinate is 24m becomes
(1) 12 (2) 6 (3) 18 (4) 3
2. When 0.2 kg of ice at 0⁰ C mixed with 0.5 kg of water at 60⁰ C in a container, the resulting temperature is 10⁰ C. The heat of fusion of ice ($S_{\text{water}} = 4.186$ J/kg/K)
(1) 1.31×10^5 J/kg (2) 2.62×10^5 J/kg
(3) 10.46×10^5 J/kg (4) 5.23×10^5 J/kg
3. 5 bulbs each of 100 W are connected across 220 V power supply for domestic application. If each unit costs Rs. 4 then the cost per day in Rs. is
(1) 48 (2) 24 (3) 96 (4) 12
4. A solenoid of length 1.0m has a radius of 1cm and is made up of 1000 turns. It carries a current of 2.5 A. The magnitude of the magnetic field inside the solenoid in Teslais
(1) $\pi \times 10^{-3}$ (2) $\pi \times 10^{-4}$ (3) $\pi \times 10^{-6}$ (4) $\pi \times 10^{-5}$

MODEL QUESTIONS – CHEMISTRY

1. Which one of the following has stable electronic configuration?
(1) N (2) C (3) F (4) Al
2. Which one of the following exhibits acidity?
(1) R-OH (2) R-CHO (3) R-X (4) C₆H₅-OH
3. Assertion (A): Carbonyl compounds undergo nucleophilic addition reactions.

Reason (R): Carbonyl group is non-polar.

The correct answer is:

- (1) Both (A) and (R) are true and (R) is the correct explanation of(A)
- (2) Both (A) and (R) are true and (R) is not the correct explanation of(A)
- (3) (A) is true but (R) is not true
- (4) (A) is not true but (R) is true

4. Match the following:

LIST I LIST II

- | | |
|--|-----------|
| (A) Packing efficiency in ccp structure | (1) 2 |
| (B) Number of atoms in bcc unit cell | (2) 4 |
| (C) Packing efficiency in simple cubic structure | (3) 52.4% |
| (D) Number of atoms in fcc unit cell | (4) 68.0% |
| | (5) 74% |

The correct answer is:

	(A)	(B)	(C)	(D)
(1)	5	4	3	2
(2)	3	2	1	4
(3)	5	1	3	2
(4)	4	1	2	3

ANNEXURE – III

DEFINITION OF LOCAL / NON - LOCAL STATUS

1. A Candidate shall be regarded as a local Candidate in relation to a local area (AU/OU/SVU)

If he/she has studied in an Educational Institution or Educational Institutions in such local area for a period of not less than four consecutive academic years ending with the academic year in which he/she appeared or first appeared in the relevant qualifying examination as the case may be.

Where, during the whole or any part of the four consecutive academic years in which he/she appeared, or first appeared in the relevant qualifying examination, he/she has not studied in any educational institutions, if he/she resided in that local area for a period of not less than four years immediately preceding the date of commencement of the relevant qualifying examination in which he/she appeared, or first appeared, as the case maybe.

2. A candidate who is not regarded as local candidate under clause (1) above in relation to any local area shall,

If he/she studied in the educational institutions in the state for a period of not less than seven consecutive academic years ending with the academic year in which he/she appeared or first appeared for the relevant qualifying examination as the case may be, be regarded as a local candidate in relation to

- i. Such local area where he/she studied for the maximum period out of period of seven years.
OR
- ii. Where the period of his/her study in two or more local areas is equal, such local area where he/she studied last in such equal periods.

If during the whole or any part of the seven consecutive academic years ending with the academic year in which he/she appeared or first appeared for the relevant qualifying examination, he/she has not studied in the educational institutions, in any local area, but has resided in the state during the whole of the said period of seven years, be regarded as a local candidate in relation to

- i. Such local area where he/she has resided for the maximum period out of the said period of seven years.
OR
- ii. Where the period of his/her residence in two or more local areas is equal such local area where he/she had resided last in such periods.

Note:

1. Local area in respect of Andhra University (A.U. area) includes Nagarjuna University area. In respect of Sri Venkateswara University (S.V.U. area), it includes Sri Krishnadevaraya University area. In respect of Osmania University (O.U. area), it includes Kakatiya University area. (Table showing the Local Areas of new districts of AP is given below).
2. The Candidate belonging to PIO / OCI category will be considered as under non local category only.
3. Candidates coming under any of the categories given below and not satisfying the

conditions mentioned in 1 or 2 above are treated as “Non-Local”to all the three University areas specified above.

a. Candidates who have resided in the state of A.P. for a total period of 10 years or more excluding the period of study outside this state.

OR

b. Candidates either of whose parents has resided in this state for a total period of 10 years or more excluding the periods of employment outside the state

OR

c. Candidates either of whose parents is employed in the State of A.P. or Central Government Public Sector Corporations, Local Bodies, Universities and other similar quasi Government Institutions within this state, at the time of submitting the application

OR

d. Candidates who are spouses of those employed in the State of A.P. or Central Government, Public Sector Corporations, Local Bodies, Universities and other similar quasi Government Institutions within this state, at the time of submitting the application.

For full details refer G.O.No. 646, dated 10.07.1979.

Note:

Blank **Proforma III** is provided for submitting relevant information regarding Local/Non-Local status of candidates.

S.No	District Official Name	Local Area
1	Srikakulam	AU
2	Parvathipuram Manyam	AU
3	Vizianagaram	AU
4	Visakhapatnam	AU
5	Alluri Sitharama Raju	AU
6	Anakapalli	AU
7	Kakinada	AU
8	East Godavari	AU
9	Konaseema	AU
10	Eluru	AU
11	West Godavari	AU
12	NTR	AU
13	Krishna	AU
14	Palnadu	AU
15	Guntur	AU
16	Bapatla	AU
17	Prakasam	AU
18	Sri Potti Sriramulu Nellore	SVU
19	Kurnool	SVU
20	Nandyal	SVU
21	Anantapur	SVU
22	Sri Sathya Sai	SVU
23	YSR	SVU
24	Annamayya	SVU
25	Tirupati	SVU
26	Chittoor	SVU

ANNEXURE – IV

NORMALIZATION PROCEDURE

Candidates are aware that the APEAPCET-2024 (MPC and Bi.PC Streams) will be conducted from 13-05-2024 to 16-05-2024 in multiple sessions.

APEAPCET-2024 is being conducted in multiple sessions based on the same syllabus, same pattern for candidates having the same eligibility criteria. A candidate will be eligible to appear only in one session. Since the question paper will be different for each session, there is a possibility that the candidates compare themselves about the variation in the difficulty level of questions. However, it may be noted that utmost care will be taken so that all the papers are of the same standard. Further, it is decided to adopt a normalization process to eliminate any such variations in the difficulty level of various sessions.

What is Normalization?

Normalization, as used in the Indian context, is a process for ensuring the students neither advantaged nor disadvantaged by the difficulty of examinations conducted in multiple sessions. This process is based on a simple formula which has been adopted as recommended by the experts from reputed educational institutions at all India level and Universities. The process is being implemented in other all India / Nationwide entrance tests for admission into undergraduate and graduate professional courses. Normalization process ranks all the candidates across all sessions on a comparative scale. In any normalization process, the marks of the easier session may be reduced marginally and the marks of the harder paper may increase marginally on the global level, depending on the average performance in each session. If there is no much difference in the averages between the two sessions then there won't be much difference in the normalized marks as well. Normalizing marks would justify the candidates while protecting their actual performance.

AP EAPCET marks Normalization Process:

The main aim of the normalization is to justify the candidates who got a difficult paper compared to an easier paper. Hence, the task is to rationalize in the best possible sense and rank the candidates based on the global performance. Various national level examination bodies like JEE (Main), GATE etc. are currently adopting such normalization procedures. Correspondingly, EAPCET committee has deliberated extensively and decided to use the following normalization procedure.

Normalized Marks of the candidate

$$GMS + \frac{\text{Top Average Global} - GMS}{\text{Top Average Session} - SMS} \times (\text{Marks Obtained by Candidate} - SMS)$$

where

SMS: (Average + Standard Deviation) of the session in which the candidate belongs to

GMS: (Average + Standard Deviation) of all the candidates across all sessions together

Top Average Session: Average marks of the top 0.1% of the candidates in the session in

which the candidate belongs to

Top Average Global: Average marks of the top 0.1% of all the candidates across all sessions together

Weightage for assigning merit ranks:

75% of AP EAPCET normalized marks and 25% of Intermediate Marks in group subjects to prepare the rank.

Note:

➤ For Candidates having qualifying marks in AP EAPCET-2024, if after normalization, the marks(s) in any individual subject(s) become negative, then the normalized mark(s) in the respective subject(s) are treated as zero. However, total marks in three subjects are considered as EAPCET marks.

➤ For the candidates for whom there is no qualifying cut-off in AP EAPCET - 2024, if the marks in all the three subjects after normalization go below zero (negative), the total marks are treated as zero and the rank is assigned. If the tie persists then APEAPCET 2024 normalization marks (though negative are considered for breaking the tie.

Demonstration with a sample data:

The following is based on sample data to explain the normalization process. The data is based on an almost equal number of candidates in all four sessions. The normalization is shown subject wise so that students get the benefit based on subject wise performance rather than the entire paper in a session.

Averages and Standard Deviations in a particular session and averages of top 0.1% candidates of a particular session, Global Average and Standard Deviations of all sessions together, Averages of top 0.1% candidates in all sessions is given in Table

1. Example data of normalized marks is shown in Table 2 to Table 5.

Table 1: Averages and Standard Deviations of sample data

		Maths	Physics	Chemistry
Session1	Avg	27.01245	11.44816	13.56629
	Std_Dev	10.23632	4.135746	5.939418
	Top 0.1% Avg	74.28	37.93	37.7
Session2	Avg	27.23746	11.49711	13.69626
	Std_Dev	10.38974	4.177132	6.005731
	Top 0.1% Avg	74.85	38.03	37.93
Session3	Avg	23.8686	10.25933	13.55555
	Std_Dev	7.717783	3.20095	5.403734
	Top 0.1% Avg	70.05	35.55	39
Session4	Avg	23.95383	10.2931	13.55808
	Std_Dev	7.793973	3.212227	5.460391
	Top 0.1% Avg	70.18	36.4	39.38
<i>All sessions together</i>	<i>Global_Avg</i>	<i>25.52725</i>	<i>10.87743</i>	<i>13.60516</i>
	<i>Global_Std_Dev</i>	<i>9.252138</i>	<i>3.764241</i>	<i>5.718592</i>
	Top 0.1% Global Avg	73.92	37.65	38.74

Table 2: Example of Normalized marks in Session 1:

Candidate	Marks	Maths	Physics	Chemistry	Total
C1	Actual Marks	0	0	0	0
	Normalized Marks	-4.6	-1.407	-1.49	-7.498
C2	Actual Marks	8	3	5	16
	Normalized Marks	3.857	1.682	3.845	9.385
C3	Actual Marks	61	16	25	102
	Normalized Marks	59.89	15.07	25.19	100.1
C4	Actual Marks	76	36	38	150
	Normalized Marks	75.75	35.67	39.06	150.5

Table 3: Example of Normalized marks in Session 2:

Candidate	Marks	Maths	Physics	Chemistry	Total
C1	Actual Marks	1	3	4	8
	Normalized Marks	-3.74	1.595	2.595	0.451
C2	Actual Marks	14	9	2	25
	Normalized Marks	9.932	7.771	0.464	18.17
C3	Actual Marks	48	24	33	105
	Normalized Marks	45.69	23.21	33.49	102.4
C4	Actual Marks	78	38	39	155
	Normalized Marks	77.24	37.62	39.88	154.7

Table 4: Example of Normalized marks in Session 3:

Candidate	Marks	Maths	Physics	Chemistry	Total
C1	Actual Marks	0	0	0	0
	Normalized Marks	2.634	0.622	0.957	4.21
C2	Actual Marks	10	5	1	16
	Normalized Marks	12.81	5.83	1.926	20.6
C3	Actual Marks	50	17	31	98
	Normalized Marks	53.52	18.33	30.99	103
C4	Actual Marks	74	39	38	151
	Normalized Marks	77.94	41.24	37.77	157

Table 5: Example of Normalized marks in Session 4:

Candidate	Marks	Maths	Physics	Chemistry	Total
C1	Actual Marks	4	1	2	7
	Normalized Marks	6.457	1.97	2.935	11.4
C2	Actual Marks	19	7	9	35
	Normalized Marks	21.75	8.018	9.641	39.4
C3	Actual Marks	13	6	16	35
	Normalized Marks	15.63	7.01	16.35	39
C4	Actual Marks	67	9	24	100
	Normalized Marks	70.69	10.03	24.01	105
C5	Actual Marks	57	8	35	100
	Normalized Marks	60.49	9.025	34.55	104
C6	Actual Marks	80	38	40	158
	Normalized Marks	83.94	39.26	39.34	163

ANNEXURE – V

CRITERIA FOR RANKING (AP EAPCET – 2024 “E CATEGORY”)

As per G.O.Ms.No 73 of Higher Education(EC.2) Department, dated 28-07-2011, the candidates who have secured qualifying marks in AP EAPCET-2024 and candidates belonging to the category of Scheduled Caste and Schedule Tribe, for whom qualifying marks have not been prescribed, shall be assigned ranking in the order of merit based on combined score obtained by giving 75% weightage to the marks secured in AP EAPCET-2024 and 25% weightage to the marks secured in the relevant group subjects namely Mathematics, Physics, Chemistry of the qualifying examination.

For the preparation of the merit list, in case of more than one student securing the same combined score obtained as mentioned above, the tie shall be resolved to decide the relative ranking by successively considering the following

- (I) The total marks secured in AP EAPCET-2024
- (II) The Marks secured in mathematics in AP EAPCET-2024
- (III) The marks secured in Physics in AP EAPCET-2024
- (IV) If the tie persists, same rank will be given and the older (based on date of birth) will be given preference over the younger at the time of admissions.

The weightage of marks in the case of candidates belonging to the category of Persons of Indian Origin (PIO) / Overseas Citizen of India (OCI) Card Holders, will be decided by a committee constituted by the competent authority.

APEAPCET 2024 - MATHEMATICS SYLLABUS

SUBJECT: MATHEMATICS

ALGEBRA

- a) **Functions:** Types of functions – Definitions - Inverse functions & Theorems - Domain, Range and Inverse.
- b) **Mathematical Induction:** Principles of Mathematical Induction & Theorems – Applications of Mathematical Induction – Problems on divisibility.
- c) **Matrices:** Types of matrices - Scalar multiple of a matrix and multiplication of matrices - Transpose of a matrix – Determinants - properties of determinants - Adjoint and Inverse of a matrix – Consistency and inconsistency of system of simultaneous equations - Rank of a matrix - Solution of simultaneous linear equations.
- d) **Complex Numbers:** Complex number as an ordered pair of real numbers- fundamental operations - Representation of complex numbers in the form $a+ib$ - Modulus and amplitude of complex numbers–Illustrations - Geometrical and Polar Representation of complex numbers in Argand plane-Argand diagram.
- e) **De Moivre's Theorem:** De Moivre's theorem- Integral and Rational indices - n^{th} roots of unity- Geometrical Interpretations–Illustrations.
- f) **Quadratic Expressions:** Quadratic expressions, equations in one variable - Sign of quadratic expressions – Change in signs – Maximum and minimum values - Quadratic Inequations.
- g) **Theory of Equations:** The relation between the roots and coefficients in an equation - Solving an equations when two or more roots of it are connected by certain relation - Equation with real coefficients, occurrence of complex roots in conjugate pairs and its consequences, Transformation of equations- Reciprocal equations.
- h) **Permutations and Combinations:** Fundamental Principle of counting – linear and circular permutations- Permutations of 'n' dissimilar things taken 'r' at a time - Permutations when repetitions allowed - Circular permutations - Permutations with constraint repetitions - Combinations-definitions, certain theorems.
- i) **Binomial Theorem:** Binomial theorem for positive integral index, Binomial theorem for rational Index - Approximations using Binomial theorem
- j) **Partial fractions:** Partial fractions of $f(x)/g(x)$ when $g(x)$ contains non –repeated linear factors - Partial fractions of $f(x)/g(x)$ where both $f(x)$ and $g(x)$ are polynomials and when $g(x)$ contains repeated and/or non-repeated linear factors - Partial fractions of $f(x)/g(x)$ when $g(x)$ contains irreducible factors.

TRIGONOMETRY

- a) **Trigonometric Ratios upto Transformations:** Trigonometric ratios – Variation - Graphs and Periodicity of Trigonometric functions - Trigonometric ratios of Compound angles - Trigonometric ratios of multiple and sub- multiple angles - Transformations - Sum and Product rules.
- b) **Trigonometric Equations:** General solutions of Trigonometric Equations – Simple Trigonometric Equations – Solutions.
- c) **Inverse Trigonometric Functions:** To reduce a Trigonometric function into a bijective function – Graphs of Inverse Trigonometric functions – Properties of Inverse Trigonometric functions.
- d) **Hyperbolic Functions:** Definition of Hyperbolic Function – Graphs - Definition of Inverse

Hyperbolic Functions – Graphs - Addition formulae of Hyperbolic Functions.

- e) **Properties of Triangles:** Relation between sides and angles of a Triangle - Sine, Cosine, Tangent and Projection rules- Half angle formulae and areas of a triangle – Incircle and Excircles of a Triangle.

VECTOR ALGEBRA

- a) **Addition of Vectors:** Vectors as a triad of real numbers - Classification of vectors - Addition of vectors - Scalar multiplication - Angle between two non-zero vectors - Linear combination of vectors - Components of a vector in three dimensions - Vector equations of line and plane including their Cartesian equivalent forms.
- b) **Product of Vectors:** Scalar or dot product of two vectors - Geometrical Interpretations - orthogonal projections - Properties of dot product - Expression of dot product in i, j, k system - Angle between two vectors - Geometrical Vector methods – Vector equations of plane in normal form-Angle between two planes- Vector product of two vectors and properties- Vector product in i, j, k system- Vector Areas – Scalar triple product – Vector equation of a plane – different forms, skew lines, shortest distance – plane, condition for coplanarity etc. – vector triple product – results.

MEASURES OF DISPERSION AND PROBABILITY

- a) **Measures of Dispersion** - Range - Mean deviation - Variance and standard deviation of ungrouped/grouped data, coefficient of variation and analysis of frequency distributions with equal means but different variances.
- b) **Probability:** Random experiments and events - Classical definition of probability, Axiomatic approach and addition theorem of probability - Independent and dependent events - conditional probability- multiplication theorem and Baye's theorem.
- c) **Random Variables and Probability Distributions:** Random Variables - Theoretical discrete distributions – Binomial and Poisson Distributions.

COORDINATE GEOMETRY

- a) **Locus:** Definition of locus –Illustrations-To find equations of locus-Problems connected to it.
- b) **Transformation of Axes:** Transformation of Axes – Rules, derivations and illustrations – Rotation of Axes – Derivations – Illustrations.
- c) **The Straight Line:** Revision of fundamental results - Straight line - Normal form – Illustrations - Straight line - Symmetric form - Straight line - Reduction into various forms - Intersection of two Straight Lines - Family of straight lines - Concurrent lines - Condition for Concurrent lines - Angle between two lines - Length of perpendicular from a point to a Line - Distance between two parallel lines - Concurrent lines - properties related to a triangle.
- d) **Pair of Straight lines:** Equations of pair of lines passing through origin - angle between a pair of lines - Condition for perpendicular and coincident lines, bisectors of angles - Pair of bisectors of angles - Pair of lines - second degree general equation - Conditions for parallel lines - distance between them, Point of intersection of pair of lines - Homogenising a second degree equation with a first degree equation in x and y .
- e) **Circle :** Equation of circle -standard form-centre and radius - Equation of a circle with a given line segment as diameter & equation of circle through three non collinear points - parametric equations of a circle - Position of a point in the plane of a circle – power of a point-definition of tangent-length of tangent - Position of a straight line in the plane of a circle-conditions for a line to be tangent – chord joining two points on a circle – equation of the tangent at a point on the circle- point of contact-equation of normal-Chord of contact-pole and polar-conjugate points and conjugate lines- equation of chord with given middle point, Relative position of two

circles- circles touching each other externally, internally common tangents –centers of similitude- equation of pair of tangents from an external point.

- f) **System of circles:** Angle between two intersecting circles –condition for orthogonality - Radical axis of two circles- properties- Common chord and common tangent of two circles – radical centre - Intersection of a line and a Circle.
- g) **Parabola:** Conic sections –Parabola- equation of parabola in standard form-different forms of parabola- parametric equations, Equations of tangent and normal at a point on the parabola (Cartesian and Parametric)- conditions for straight line to be a tangent.
- h) **Ellipse:** Equation of ellipse in standard form- Parametric equations, Equation of tangent and normal at a point on the ellipse (Cartesian and parametric)- condition for a straight line to be a tangent.
- i) **Hyperbola:** Equation of hyperbola in standard form- Parametric equations - Equations of tangent and normal at a point on the hyperbola (Cartesian and parametric) - conditions for a straight line to be tangent-Asymptotes.
- j) **Three Dimensional Coordinates:** Coordinates - Section formulae - Centroid of a triangle and tetrahedron.
- k) **Direction Cosines and Direction Ratios:** Direction Cosines –Direction Ratios.
- l) **Plane:** Cartesian equation of a Plane –Simple Illustrations.

CALCULUS

- a) **Limits and Continuity:** Intervals and neighborhoods – Limits - Standard Limits–Continuity.
- b) **Differentiation:** Derivative of a function - Elementary Properties - Trigonometric, Inverse Trigonometric, Hyperbolic, Inverse Hyperbolic Function – Derivatives - Methods of Differentiation – Second Order Derivatives.
- c) **Applications of Derivatives:** Errors & Approximations - Geometrical Interpretation of a derivative - Equations of tangents and normal to a curve – Lengths of Tangent, Normal, Subtangent and subnormal - Angles between two curves and condition for orthogonality of curves – Derivative as a rate of change – Rolle’s theorem and Lagrange’s Mean value theorem - Increasing and decreasing functions - Maxima and Minima.
- d) **Integration:** Integration as the inverse process of differentiation- Standard forms -properties of integrals - Method of substitution- integration of Algebraic, exponential, logarithmic, trigonometric and inverse trigonometric functions - Integration by parts – Integration by the method of substitution – Integration of algebraic and trigonometric functions – Integration by parts – Integration of exponential, logarithmic and inverse trigonometric functions – Integration - Partial fractions method – Reduction formulae.
- e) **Definite Integrals:** Definite Integral as the limit of sum, Interpretation of Definite Integral as an area. Fundamental theorem of Integral Calculus. Properties, Reduction formulae, Application of Definite integral to areas.
- f) **Differential equations:** Formation of differential equation-Degree and order of an ordinary differential equation - Solving differential equation by i) Variables separable method, ii) Homogeneous differential equation, iii) Non Homogeneous differential equation iv) Linear differential equations

APEAPCET 2024 - PHYSICS SYLLABUS

SUBJECT: PHYSICS

1. PHYSICAL WORLD: What is physics? Scope and excitement of physics. Physics, technology and society, Fundamental forces in nature, Nature of physical laws

2. UNITS AND MEASUREMENTS: The international system of units, Measurement of Length, Measurement of Large Distances, Estimation of Very Small Distances, Size of a Molecule, Range of Lengths, Measurement of Mass, Range of Masses, Measurement of time, Accuracy, precision of instruments and errors in measurement, Systematic errors, random errors, least count error, Absolute Error, Relative Error and Percentage Error, Combination of Errors, Significant figures, Rules for Arithmetic Operations with Significant Figures, Rounding off the Uncertain Digits, Rules for Determining the Uncertainty in the Results of Arithmetic Calculations, Dimensions of Physical Quantities, Dimensional Formulae and dimensional equations, Dimensional Analysis and its Applications, Checking the Dimensional Consistency of Equations, Deducing Relation among the Physical Quantities.

3. MOTION IN A STRAIGHT LINE: Position, path length and displacement, average velocity and average speed, instantaneous velocity and speed, acceleration, kinematic equations for uniformly accelerated motion, relative velocity.

4. MOTION IN A PLANE: Scalars and vectors, position and displacement vectors, equality of vectors, multiplication of vectors by real numbers, addition and subtraction of vectors - graphical method, resolution of vectors, vector addition - analytical method, motion in a plane, position vector and displacement, velocity, acceleration, motion in a plane with constant acceleration, relative velocity in two dimensions, projectile motion, equation of path of a projectile, time of maximum height, maximum height of a projectile, horizontal range of projectile, uniform circular motion.

5. LAWS OF MOTION: Aristotle's fallacy, Laws of inertia, Newton's first law of motion, Newton's second law of motion- momentum, impulse, Newton's third law of motion, conservation of momentum, Equilibrium of a particle, Common forces in mechanics, friction, types of friction, static, kinetic and rolling frictions, Circular motion, Motion of a car on a level road, Motion of a car on a banked road, solving problems in mechanics.

6. WORK, ENERGY AND POWER: The Scalar Product, Notions of work and kinetic energy, The work-energy theorem, Work, Kinetic energy, Work done by a variable force, The work-energy theorem for a variable force, The concept of Potential Energy, The conservation of Mechanical Energy, The Potential Energy of a spring, Various forms of energy, Heat, Chemical Energy, Electrical Energy, The Equivalence of Mass and Energy, Nuclear Energy, The Principle of Conservation of Energy, Power, Collisions, Elastic and Inelastic Collisions, Collisions in one dimension, Coefficient of Restitution and its determination, Collisions in Two Dimensions.

7. SYSTEM OF PARTICLES AND ROTATIONAL MOTION: Rigid body motion, Centre of mass, Centre of Gravity, Motion of centre of mass, Linear momentum of a system of particles, Vector product of two vectors, Angular velocity and its relation with linear velocity, Angular acceleration, Kinematics of rotational motion about a fixed axis, Moment of force (Torque), Angular momentum of particle, Torque and angular momentum for a system of a particles - conservation of angular momentum, Equilibrium of a rigid body, Principle of moments, Moment of inertia, Dynamics of rotational motion about a fixed axis, Angular momentum in case of rotation about a fixed axis - conservation of angular momentum, Rolling motion, Kinetic Energy of Rolling Motion.

8. OSCILLATIONS: Periodic and oscillatory motions, Period and frequency, Displacement, Simple harmonic motion (S.H.M.), Simple harmonic motion and uniform circular motion, Velocity and acceleration in simple harmonic motion, Force law for Simple harmonic Motion, Energy in simple harmonic motion, some systems executing Simple Harmonic Motion, Oscillations due to a spring, The Simple Pendulum, damped simple harmonic motion, Forced oscillations and resonance.

9. GRAVITATION: Kepler's laws, Universal law of gravitation, central forces, the gravitational constant, Acceleration due to gravity of the earth, Acceleration due to gravity below and above the surface of earth, Gravitational potential energy, Escape speed, Orbital Speed, Earth satellites, Energy of an orbiting satellite, Geostationary and polar satellites, Weightlessness.

10. MECHANICAL PROPERTIES OF SOLIDS: Elastic behavior of solids, Stress and strain, Hooke's law, Stress-strain curve, Elastic moduli, Young's Modulus, Determination of Young's Modulus of the Material of a Wire, Shear Modulus, Bulk Modulus, Poisson's ratio, Elastic potential energy in a stretched wire, Applications of elastic behavior of materials.

11. MECHANICAL PROPERTIES OF FLUIDS: Pressure, Pascal's Law, Variation of Pressure with Depth, Atmospheric Pressure and Gauge Pressure, Hydraulic Machines, Archimedes' Principle, Streamline flow, Bernoulli's principle, Speed of Efflux, Torricelli's Law, Venturi- meter, Blood Flow and Heart Attack, Dynamic Lift, Viscosity, Variation of Viscosity of fluids with temperature, Stokes' Law, Reynolds number, Critical Velocity, Surface tension and Surface Energy, Angle of Contact, Drops and Bubbles, Capillary Rise, Detergents and Surface Tension.

12. THERMAL PROPERTIES OF MATTER: Temperature and heat, Measurement of temperature, Ideal-gas equation and absolute temperature, Thermal expansion, Specific heat capacity, Calorimetry, Change of state, Triple Point, Regelation, Latent Heat, Heat transfer – Conduction, convection and radiation, Black body Radiation, Greenhouse Effect, Newton's law of cooling and its experimental verification.

13. THERMODYNAMICS: Thermal equilibrium, Zeroth law of thermodynamics, Heat, Internal Energy and work, First law of thermodynamics, Specific heat capacity, Specific heat capacity of water, Thermodynamic state variables and equation of State, Thermodynamic processes, Quasi-static process, Isothermal Process, Adiabatic Process, Isochoric Process, Isobaric process, Cyclic process, Heat engines , Refrigerators and heat pumps, Second law of thermodynamics, Reversible and irreversible processes, Carnot engine, Carnot's theorem.

14. KINETIC THEORY: Molecular nature of matter, Behaviour of gases, Boyle's Law, Charles' Law, Kinetic theory of an ideal gas, Pressure of an Ideal Gas, Kinetic interpretation of temperature, Law of equipartition of energy, Specific heat capacity, Monatomic Gases, Diatomic Gases, Polyatomic Gases, Specific Heat Capacity of Solids, Specific Heat Capacity of Water, Mean free path.

15. WAVES: Transverse and longitudinal waves, wave displacement relation in a progressive wave, amplitude and phase, wavelength and angular wave number, period, angular frequency and frequency, the speed of a travelling wave, speed of a transverse wave on stretched string, speed of a longitudinal wave (speed of sound), the principle of superposition of waves, reflection of waves, standing waves and normal modes, beats, Doppler effect – source moving & Observer stationary, observer moving and source stationary, both observer and source are moving, applications of Doppler effect.

16. RAY OPTICS AND OPTICAL INSTRUMENTS: Reflection of Light by Spherical Mirrors, Sign convention, Focal length of spherical mirror, Mirror equation, refraction, total internal reflection, total internal reflection in nature and its technological applications, refraction at spherical surfaces and by lenses, power of a lens, combination of thin lenses in contact, refraction through a prism, dispersion by a prism, natural phenomena due to sunlight – Rainbow, Scattering of light, optical instruments, the eye, the simple and compound microscopes, refracting telescope and Cassegrain reflecting telescope.

17. WAVE OPTICS: Huygens principle, refraction and reflection of plane waves using Huygens principle, refraction in a rarer medium (at the denser medium boundary), reflection of a plane wave by a plane surface, the Doppler effect, coherent and incoherent addition of waves, interference of light waves and Young's experiment, Diffraction, Single slit, resolving power of optical instruments, the validity of ray optics, Polarization by scattering, Polarisation by reflection, plane polarized light, polaroids

18. ELECTRIC CHARGES AND FIELDS: Electric charge, conductors and insulators, charging by induction, basic properties of electric charges, additivity of charges, conservation of charge, quantization of charge, Coulomb's law, forces between multiple charges, electric field, electric field due to a system of charges, physical significance of electric field, electric field lines, electric flux, electric dipole, the field of an electric dipole for points on the axial line and on the equatorial plane, physical significance of dipoles, dipole in a uniform external field, continuous charge distribution, Gauss's law, Applications of Gauss's Law infinitely long straight uniformly charged wire, infinite plane sheet, field due to uniformly charged thin spherical shell.

19. ELECTROSTATIC POTENTIAL AND CAPACITANCE: Electrostatic potential, potential due to a point charge, potential due to an electric dipole, potential due to a system of charges, equipotential surfaces, relation between field and potential, potential energy of a system of charges, potential energy in an external field, potential energy of a single charge, potential energy of a system of two charges in an external field, potential energy of a dipole in an external field, electrostatics of conductors, dielectrics and polarisation, electric displacement, capacitors and capacitance, the parallel plate capacitor, effect of dielectric on capacitance, combination of capacitors, capacitors in series, capacitors in parallel, energy stored in a capacitor, Van de Graaff generator.

20. CURRENT ELECTRICITY: Electric current, electric current in conductors, Ohm's law, drift of electrons and the origin of resistivity, mobility, limitations of Ohm's law, resistivity of various materials, colour code of resistors, Temperature dependence of resistivity, electrical energy, power. Combination of Resistors, Series and Parallel, Cells, EMF, internal resistance, cells in series and in parallel, Kirchhoff's rules, Wheatstone Bridge, Meter Bridge, Potentiometer.

21. MOVING CHARGES AND MAGNETISM: Magnetic force, sources and fields, magnetic field, Lorentz force, magnetic force on a current carrying conductor, motion in a magnetic field, helical motion of charged particles, motion in combined electric and magnetic fields, velocity selector, cyclotron, magnetic field due to a current element, Biot – Savart's law, Magnetic field on the axis of a circular current loop, Ampere's circuital law, the solenoid and the toroid, force between two parallel current carrying conductors, the ampere (UNIT), torque on current loop, magnetic dipole, torque on a rectangular current loop in a uniform magnetic field, circular current loop as a magnetic dipole, the magnetic dipole moment of a revolving electron, the Moving Coil Galvanometer; conversion into ammeter and voltmeter.

22. MAGNETISM AND MATTER: The bar magnet, the magnetic field lines, bar magnet as an equivalent solenoid, The dipole in a uniform magnetic field, the electrostatic analog, Magnetism and Gauss's Law, The Earth's magnetism, magnetic declination and dip, magnetization and

magnetic intensity, magnetic properties of materials – Diamagnetism, Paramagnetism and Ferromagnetism, permanent magnets and electromagnets.

23. ELECTROMAGNETIC INDUCTION: The experiments of Faraday and Henry, magnetic flux, Faraday's Law of induction, Lenz's law and conservation of energy, motional electromotive force, energy consideration - a quantitative study, Eddy currents, inductance, mutual inductance, self-inductance, AC generator.

24. ALTERNATING CURRENT: AC voltage applied to a resistor, representation of AC current and voltage by rotating vectors - Phasors, AC voltage applied to an inductor, AC voltage applied to a capacitor, AC voltage applied to a series LCR circuit, Phasor – diagram solution, analytical solution, resonance, sharpness of resonance, Power in AC circuit: The power factor, Wattless current LC oscillations, transformers.

25. ELECTROMAGNETIC WAVES: Displacement Current, Maxwell's equations, electromagnetic waves, sources of electromagnetic waves, nature of electromagnetic waves, electromagnetic spectrum: radio waves, microwaves, infrared waves, visible rays, ultraviolet rays, X-rays, gamma rays.

26. DUAL NATURE OF RADIATION AND MATTER: Electron emission, Photoelectric Effect, Hertz's observations, Hallwachs and Lenard's observations, experimental study of photoelectric effect, effect of intensity of light on photocurrent, effect of potential on photoelectric current, effect of frequency of incident radiation on stopping potential, Photoelectric effect and Wave theory of Light, Einstein's Photoelectric equation, Energy Quantum of Radiation, particle nature of light, the photon, wave nature of matter, photocell, Davisson and Germer Experiment

27. ATOMS: Alpha particle scattering and Rutherford's nuclear model of atom, alpha particle trajectory, electron orbits, atomic spectra, spectral series, Bohr model of the hydrogen atom, energy levels, Franck – Hertz experiment, the line spectra of the hydrogen atom, deBroglie's explanation of Bohr's second postulate of quantization.

28. NUCLEI: Atomic masses and composition of nucleus, discovery of neutron, size of the nucleus, Mass - Energy, Nuclear Binding Energy, Binding energy of Nucleon and its variation with Mass Number, Nuclear Force, Radioactivity - Law of radioactive decay, half life and mean life of a Radioactive material, Alpha decay, Beta decay and Gamma decay, Nuclear Energy, Fission, Nuclear reactor, nuclear fusion, energy generation in stars, controlled thermonuclear fusion.

29. SEMICONDUCTOR ELECTRONICS: MATERIALS, DEVICES AND SIMPLE CIRCUITS: Classification of metals, conductors, and semiconductors on the basis of conductivity and energy bands, Band theory of solids, Intrinsic semiconductor, Extrinsic semiconductor, p-type semiconductor, n-type semiconductor, p-n junction, forward bias, reverse bias, Semiconductor diode, Application of junction diode as a rectifier, Zener Diode, Zener Diode as a voltage regulator, Optoelectronic junction devices, Photodiode, light emitting diode, solar cell. Junction transistor, structure and action, Basic transistor circuit configurations and transistor characteristics, transistor as a switch and as an amplifier (CE – Configuration), Feedback amplifier and transistor oscillator, Digital Electronics and Logic gates, NOT, OR, AND, NAND and NOR Gates, Integrated circuits.

30. COMMUNICATION SYSTEMS: Elements of a Communication system, basic terminology used in electronic communication systems, bandwidth of signals, bandwidth of transmission medium, propagation of electromagnetic waves, ground waves, sky waves, space wave, modulation and its necessity, size of the antenna or aerial, effective power radiated by an antenna, mixing up of signals from different transmitters, amplitude modulation, production of amplitude modulated wave, detection of amplitude modulated wave.

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APEAPCET 2024 - CHEMISTRY SYLLABUS

SUBJECT: CHEMISTRY

Unit-1: ATOMIC STRUCTURE: Sub Atomic particles, Atomic models, Developments to the Bohr's model of atom; Wave nature of electromagnetic radiation; Particle nature of electromagnetic radiation, Planck's quantum theory; Evidence for the quantized electronic Energy levels : Atomic spectra, Bohr's model for Hydrogen atom; Explanation of line spectrum of hydrogen; Limitations of Bohr's model; Quantum mechanical considerations of sub atomic particles; Dual behaviour of matter; Heisenberg's uncertainty principle; Quantum mechanical model of an atom. Important features of Quantum mechanical model of atom; Orbitals and quantum numbers; Shapes of atomic orbitals; Energies of orbitals; Filling of orbitals in atoms. Aufbau Principle, Pauli's exclusion Principle and Hund's rule of maximum multiplicity; Electronic configurations of atoms; Stability of half-filled and completely filled orbitals.

Unit-2: CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES: Genesis of periodic classification, Modern periodic law and present form of the periodic table; Nomenclature of elements with atomic number greater than 100; Electronic configuration of elements and the periodic table; Electronic configuration and types of elements s, p, d and f blocks; Trends in physical properties: (a) Atomic radius, (b) Ionic radius (c) Variation of size in inner transition elements, (d) Ionization enthalpy, (e) Electron gain enthalpy, (f) Electro negativity; Periodic trends in chemical properties: (a) Periodicity of Valence or Oxidation states, (b) Anomalous properties of second period elements –diagonal relationship; Periodic trends and chemical reactivity.

Unit-3: CHEMICAL BONDING AND MOLECULAR STRUCTURE: Kossel - Lewis approach to chemical bonding, Octet rule, Lewis representation of simple molecules, formal charges, limitations of octet rule; Ionic or electrovalent bond - Factors favourable for the formation of ionic compounds- Crystal structure of sodium chloride, Lattice Enthalpy: General properties of ionic compounds; Bond Parameters - bond length, bond angle, and bond enthalpy, bond order, resonance- Polarity of bonds dipole moment-Fajan rules; Valence Shell Electron Pair Repulsion (VSEPR) theory; Predicting the geometry of simple molecules; Valence bond theory-Orbital overlap concept- Directional properties of bonds-overlapping of atomic orbitals- types of overlapping and nature of covalent bonds-strength of sigma and pi bonds-Factors favouring the formation of covalent bonds; Hybridisation- different types of hybridization involving s, p and d orbitals- shapes of simple covalent molecules; Coordinate bond - definition with examples; Molecular orbital theory - Formation of molecular orbitals, Linear combination of atomic orbitals(LCAO)-conditions for combination of atomic orbitals-, Types of Molecular orbitals, Energy level diagrams for molecular orbitals -, Electronic Configuration and Molecular Behaviour, Bonding in some homo nuclear diatomic molecules- H_2 , He_2 , Li_2 , B_2 , C_2 , N_2 and O_2 ; Hydrogen bonding-cause of formation of hydrogen bond - Types of hydrogen bonds-inter and intra molecular-General properties of hydrogen bonds.

Unit-4: STATES OF MATTER: GASES AND LIQUIDS: Intermolecular forces; Thermal Energy; Intermolecular forces Vs Thermal interactions; The Gaseous State; The Gas Laws; Ideal gas equation; Graham's law of diffusion - Dalton's Law of partial pressures; Kinetic molecular theory of gases; Kinetic gas equation of an ideal gas (No derivation) deduction of gas laws from Kinetic gas equation; Distribution of molecular speeds, Kinetic Energy, Behaviour of real gases - Deviation from Ideal gas behaviour - Compressibility factor Vs Pressure diagrams of real gases; Liquification of gases, Liquid state, Vapour Pressure, Surface tension, Viscosity.

Unit-5: STOICHIOMETRY: Significant figures, Laws of Chemical Combinations - Law of

Conservation of Mass, Law of Definite Proportions, Law of Multiple Proportions, Atomic and molecular masses- mole concept and molar mass. Concept of equivalent weight; Percentage composition of compounds and calculations of empirical and molecular formulae of compounds; Stoichiometry and stoichiometric calculations- limiting reagent; Methods of Expressing concentrations of solutions- mass percent, mole fraction, molarity, molality and normality; Redox reactions-classical idea of redox reactions, oxidation and reduction reactions- redox reactions in terms of electron transfer; Oxidation number concept; Types of Redox reactions- combination, decomposition, displacement and disproportionation reactions; Balancing of redox reactions-oxidation number method Half reaction (ion-electron)method; Redox reactions in titrimetry.

Unit-6: THERMODYNAMICS: Thermodynamic Terms; The system and the surroundings; Types of systems and surroundings; The state of the system; The Internal Energy as a State Function. (a)Work (b) Heat (c) The general case, the first law of Thermodynamics; Applications; Work; Enthalpy, H- a useful new state function; Extensive and intensive properties; The relationship between C_p and C_v ; Measurement of ΔU and ΔH : Calorimetry; Enthalpy change, $\Delta_r H$ of reactions- reaction Enthalpy (a) Standard enthalpy of reactions, (b) Enthalpy changes during transformations, (c) Standard enthalpy of formation, (d) Thermochemical equations (e) Hess's law of constant Heat summation; Enthalpies for different types of reactions. (a) Standard enthalpy of combustion ($\Delta_c H^0$), (b) Enthalpy of atomization ($\Delta_a H^0$), phase transition, sublimation and ionization, (c) Bond Enthalpy ($\Delta_{\text{bond}} H^0$), (d) Enthalpy of solution ($\Delta_{\text{sol}} H^0$) and dilution-lattice enthalpy; Spontaneity. (a) Is decrease in enthalpy a criterion for spontaneity? (b) Entropy and spontaneity, the second law of thermodynamics, (c) Gibbs Energy and spontaneity; Absolute entropy and the third law of thermodynamics.

Unit-7: CHEMICAL EQUILIBRIUM AND ACIDS-BASES: Equilibrium in Physical process; Equilibrium in chemical process - Dynamic Equilibrium; Law of chemical Equilibrium - Law of mass action and Equilibrium constant; Homogeneous Equilibria, Equilibrium constant in gaseous systems. Relationship between K_p and K_c ; Heterogeneous Equilibria; Applications of Equilibrium constant; Relationship between Equilibrium constant K , reaction quotient Q and Gibbs energy G ; Factors affecting Equilibria.-Le-chatlier principle application to industrial synthesis of Ammonia and Sulphur trioxide; Ionic Equilibrium in solutions; Acids, bases and salts- Arrhenius, Bronsted-Lowry and Lewis concepts of acids and bases; Ionisation of Acids and Bases - Ionisation constant of water and its ionic product- P^H scale-ionisation constants of weak acids-ionisation of weak bases-relation between K_a and K_b -Di and poly basic acids and di and poly acidic Bases-Factors affecting acid strength- Common ion effect in the ionization of acids and bases- Hydrolysis of salts and pH of their solutions, Buffer solutions - Solubility Equilibria of sparingly soluble salts. Solubility product constant Common ion effect on solubility of Ionic salts.

Unit-8: HYDROGEN AND ITS COMPOUNDS: Position of hydrogen in the periodic table; Dihydrogen-Occurrence and Isotopes; Preparation and properties of dihydrogen, uses of H_2 , Hydrides: Ionic, covalent, and non-stoichiometric hydrides; Water: Physical properties; structure of water, ice. Chemical properties of water; hard and soft water, Temporary and permanent hardness of water; Hydrogen Peroxide: Preparation, properties, structure, storage and uses. Heavy Water; Hydrogen as a fuel.

Unit-9: THE s-BLOCK ELEMENTS (ALKALI AND ALKALINE EARTH METALS):

Group 1 Elements :Alkali metals; Electronic configurations; Atomic and Ionic radii; Ionization enthalpy; Hydration enthalpy; Physical properties; Chemical properties; Uses; General characteristics of the compounds of the alkali metals: Oxides; Halides; Salts of oxo Acids; Anomalous properties of Lithium: Differences and similarities with other alkali metals, Diagonal relationship; similarities between Lithium and Magnesium; Some important compounds of Sodium: Sodium Chloride, Sodium carbonate, Sodium Hydroxide, Sodium Bicarbonate, Biological importance of Sodium and Potassium.

Group 2 Elements: Alkaline earth elements; Electronic configuration; Ionization enthalpy;

Hydration enthalpy; Physical properties, Chemical properties; Uses; General characteristics of compounds of the Alkaline Earth Metals: Oxides, hydroxides, halides, salts of oxy acids (Carbonates; Sulphates and Nitrates); Anomalous behavior of Beryllium; its diagonal relationship with Aluminum; Some important compounds of calcium: Preparation and uses of Calcium Hydroxide, Quick lime, Calcium Carbonate, Plaster of Paris; Cement, Biological importance of Calcium and Magnesium.

Unit-10: p- BLOCK ELEMENTS GROUP 13 (BORON FAMILY): General introduction – Electronic configuration, atomic radii, Ionization enthalpy, Electro negativity; Physical & Chemical properties Aluminum reactivity towards acids & alkalies, Important trends and anomalous properties of boron; Some important compounds of Boron- Borax, orthoboric acid, Diborane, Uses of boron, aluminum, and their compounds.

Unit-11: p-BLOCK ELEMENTS - GROUP 14 (CARBON FAMILY): General introduction – Electronic configuration, atomic radii, Ionization enthalpy, Electro negativity; Physical & Chemical properties; Important trends and anomalous properties of carbon; Allotropes of carbon; Uses of carbon; Some important compounds of Carbon and Silicon: Carbon Monoxide, Carbon dioxide, Silica, Silicones, Silicates, Zeolites.

Unit-12: Environmental Chemistry: Definition of terms: Air, Water, Soil Pollutions, Environmental Pollution, Atmospheric Pollution, Acid rain, Particulate pollutants, Stratospheric pollution, Water pollution, Soil pollution, Strategies to control Environmental pollution, Green Chemistry.

Unit-13: ORGANIC CHEMISTRY-SOME BASIC PRINCIPLES AND TECHNIQUES AND HYDRO CARBONS: General introduction; Tetravalency of Carbon: shapes of organic compounds; Structural representations of organic compounds; Classification of organic compounds; Nomenclature of organic compounds; Isomerism; Fundamental concepts in organic reaction mechanisms; Fission of covalent bond; Nucleophiles and electrophiles; Electron movements in organic reactions; Electron displacement effects in covalent bonds: inductive effect, resonance, resonance effect, electromeric effect, hyper conjugation; Types of Organic reactions; Methods of purification of Organic compounds, Qualitative elemental analysis of Organic compounds, Quantitative elemental analysis.

Hydrocarbons: Classification of Hydrocarbons; **Alkanes** - Nomenclature, isomerism (structural and conformations of ethane only); Preparation of alkanes; Properties - Physical properties and chemical Reactivity, Substitution reactions – Halogenation, Controlled Oxidation, Isomerisation, Aromatization, and reaction with steam; **Alkenes-** Nomenclature, structure of ethene, Isomerism; Methods of preparation; Properties-Physical and chemical reactions: Addition of dihydrogen, halogen, water, Sulphuric acid, Hydrogen halides (Mechanism- ionic and peroxide effect, Markovnikov's, anti-Markovnikov's or Kharasch effect). Oxidation, Ozonolysis and Polymerization; **Alkynes** - Nomenclature and isomerism, structure of acetylene. Methods of preparation of acetylene; Physical properties, Chemical reactions- acidic character of alkyne, addition reactions-of hydrogen, Halogen, Hydrogen halides and water. Polymerization; **Aromatic Hydrocarbons:** Nomenclature and isomerism, Structure of benzene, Resonance and aromaticity; Preparation of benzene. Physical properties. Chemical properties: Mechanism of electrophilic substitution. Electrophilic substitution reactions- Nitration, Sulphonation, Halogenation, Friedel-Craft's alkylation and acylation; Directive influence of functional groups in mono substituted benzene, Carcinogenicity and toxicity.

Unit-14: SOLID STATE: General characteristics of solid state; Amorphous and crystalline solids; Classification of crystalline solids based on different binding forces (molecular, ionic, metallic and covalent solids); Probing the structure of solids: X-ray crystallography; Crystal lattices and unit cells. Bravais lattices primitive and centered unit cells; Number of atoms in a unit

cell (primitive, body centered and face centered cubic unit cell); Close packed structures: Close packing in one dimension, in two dimensions and in three dimensions- tetrahedral and octahedral voids- formula of a compound and number of voids filled- locating tetrahedral and octahedral voids; Packing efficiency in simple cubic, bcc and in hcp, ccp lattice; Calculations involving unit cell dimensions-density of the unit cell; Imperfections in solids-types of point defects-stoichiometric and non-stoichiometric defects; Electrical properties-conduction of electricity in metals, semiconductors and insulators- band theory of metals; Magnetic properties

Unit-15: SOLUTIONS: Types of solutions; Expressing concentration of solutions-mass percentage, volume percentage, mass by volume percentage, parts per million, mole fraction, molarity and molality; Solubility: Solubility of a solid in a liquid, solubility of a gas in a liquid, Henry's law; Vapour pressure of liquid solutions: vapour pressure of liquid- liquid solutions. Raoult's law as a special case of Henry's law -vapour pressure of solutions of solids in liquids; Ideal and non-ideal solutions; Colligative properties and determination of molar mass-relative lowering of vapour pressure-elevation of boiling point-depression of freezing point-osmosis and osmotic pressure-reverse osmosis and water purification; Abnormal molar masses-van't Hoff factor

Unit-16: ELECTROCHEMISTRY AND CHEMICAL KINETICS:

Electrochemistry: Electrochemical cells; Galvanic cells: measurement of electrode potentials; Nernst equation- equilibrium constant from Nernst equation- electrochemical cell and Gibbs energy of the cell reaction; Conductance of electrolytic solutions-measurement of the conductivity of ionic solutions-variation of conductivity and molar conductivity with concentration-strong electrolytes and weak electrolytes-applications of Kohlrausch's law; Electrolytic cells and electrolysis: Faraday's laws of electrolysis-products of electrolysis; Batteries: primary batteries and secondary batteries, Fuel cells, Corrosion of metals-Hydrogen economy.

Chemical Kinetics: Rate of a chemical reaction; Factors influencing rate of a reaction: dependence of rate on concentration- rate expression and rate constant-order of a reaction, molecularity of a reaction; Integrated rate equations-zero order reactions-first order reactions- half-life of a reaction; Pseudo first order reactions; Temperature dependence of the rate of a reaction - effect of catalyst; Collision theory of chemical reaction rates

Unit-17: SURFACE CHEMISTRY: Adsorption: Distinction between adsorption and absorption-mechanism of adsorption- types of adsorption- characteristics of physisorption-characteristics of chemisorption- adsorption isotherms- adsorption from solution phase-applications of adsorption;

Catalysis: Catalysts, promoters and poisons-autocatalysis- homogeneous and heterogeneous catalysis-adsorption theory of heterogeneous catalysis- important features of solid catalysts: (a)activity (b)selectivity- shape-selective catalysis by zeolites- enzyme catalysis-characteristics and mechanism- catalysts in industry

Colloids: Classification of colloids: Classification based on physical state of dispersed phase and dispersion medium-classification based on nature of interaction between dispersed phase and dispersion medium- classification based on type of particles of the dispersed phase-multimolecular, macromolecular and associated colloids-cleansing action of soaps-preparation of colloids-purification of colloidal solutions- properties of colloidal solutions: Colligative properties, Tyndal effect, colour, Brownian movement-charge on colloidal particles, electrophoresis; coagulation-precipitation methods-coagulation of lyophilic sols and protection of colloids-Emulsions; Colloids around us-application of colloids.

Unit-18: GENERAL PRINCIPLES OF METALLURGY: Occurrence of metals; Concentration of ores- levigation, magnetic separation, froth floatation leaching; Extraction of crude metal from concentrated ore-conversion to oxide, reduction of oxide to the metal; Thermodynamic principles

of metallurgy-Ellingham diagram-limitations- applications-extraction of iron, copper and zinc from their oxides; Electrochemical principles of metallurgy; Oxidation and reduction; Refining of crude metal-distillation, liquation poling, electrolysis, zone refining and vapour phase refining; Uses of aluminum, copper, zinc and iron

Unit-19: p-BLOCK ELEMENTS: Group-15 Elements: Occurrence-electronic configuration, atomic and ionic radii, ionization enthalpy, electro negativity, physical and chemical properties; Dinitrogen-preparation, properties and uses; Compounds of nitrogen-preparation, properties, and uses of ammonia; Oxides of nitrogen; Preparation and properties of nitric acid; Phosphorous-allotropic forms; Phosphine- preparation and properties; Phosphorous halides; Oxoacids of phosphorous; Phosphorous halides & Oxo acids of phosphorous

Group-16 Elements: Occurrence-electronic configuration, atomic and ionic radii, ionization enthalpy, electron gain enthalpy, electro negativity, physical and chemical properties; Dioxygen-preparation, properties and uses; Simple oxides; Ozone-preparation, properties, structure and uses; Sulphur-allotropic forms; Sulphur dioxide-preparation, properties and uses; Oxoacids of sulphur; Sulphuric acid-industrial process of manufacture, properties and uses.

Group-17 Elements: Occurrence, electronic configuration, atomic and ionic radii, ionization enthalpy, electron gain enthalpy, electronegativity, physical and chemical properties; Chlorine-preparation, properties and uses; Hydrogen chloride- preparation, properties and uses; Oxoacids of halogens; Interhalogen compounds-preparation, properties and uses.

Group-18 Elements: Occurrence, electronic configuration, ionization enthalpy, atomic radii, electron gain enthalpy, physical and chemical properties(a) Xenon-fluorine compounds- XeF_2 , XeF_4 and XeF_6 -preparation, hydrolysis and formation of fluoro anions-structures of XeF_2 , XeF_4 and XeF_6 (b) Xenon-oxygen compounds XeO_3 and XeOF_4 -their formation and structures-uses of noble gases.

Unit-20: d AND f BLOCK ELEMENTS & COORDINATION COMPOUNDS: d and f block elements: Position in the periodic table; Electronic configuration of the d-block elements; General properties of the transition elements (d-block) -physical properties, variation in atomic and ionic sizes of transition series, ionization enthalpies, oxidation states, trends in the M^{2+}/M and M^{3+}/M^{2+} standard electrode potentials, trends in stability of higher oxidation states, chemical reactivity and E^θ values, magnetic properties, formation of coloured ions, formation of complex compounds, catalytic properties, formation of interstitial compounds, alloy formation; Some important compounds of transition elements-oxides and oxo-anions of metals-uses of potassium dichromate and potassium permanganate-structures of chromate, dichromate, manganate and permanganate ions; Inner transition elements(f-block)-lanthanoids-electronic configuration-atomic and ionic sizes-oxidation states- general characteristics; The Actinoids- electronic configurations, ionic sizes, oxidation states, general characteristics and comparison with lanthanoids; Some applications of d and f block elements.

Coordination compounds: Werner's theory of coordination compounds; Definitions of some terms used in coordination compounds; Nomenclature of coordination compounds-IUPAC nomenclature;

Isomerism in coordination compounds-(a) Stereo isomerism- Geometrical and optical isomerism (b) Structural isomerism- linkage, coordination, ionization and solvate isomerism

Bonding in coordination compounds. (a) Valence bond theory - magnetic properties of coordination compounds-limitations of valence bond theory (b) Crystal field theory (i) Crystal field splitting in octahedral and tetrahedral coordination entities (ii) Colour in coordination compounds- limitations of crystal field theory; Bonding in metal carbonyls; Stability of coordination compounds; Importance and applications of coordination compounds.

Unit-21: POLYMERS: Classification of Polymers -Classification based on source, structure, mode of polymerization, molecular forces and growth polymerization; Types of polymerization reactions- addition polymerization or chain growth polymerization- Ionic polymerization, free radical mechanism-preparation of addition polymers- polythene, Teflon and poly acrylonitrile-condensation polymerization or step growth polymerization-polyamides- preparation of Nylon 6,6 and nylon 6-polyesters- terylene- bakelite, melamine, formaldehyde polymer- copolymerization- Rubber- natural rubber-vulcanisation of rubber-Synthetic rubbers- preparation of neoprene and buna-N; Molecular mass of polymers-number average and weight average molecular masses- poly dispersity index(PDI); Biodegradable polymers- poly β -Hydroxy butyrate-Co β -Hydroxy Valerate (PHBV), Nylon 2-nylon 6; Polymers of commercial importance- poly propene, polystyrene, poly vinyl chloride(PVC), urea- formaldehyde resin, glyptal, bakelite- their monomers, structures and uses

Unit-22: BIOMOLECULES: Carbohydrates-Classification of carbohydrates-Monosaccharides: preparation of glucose from sucrose and starch-Properties and structure of glucose-D, L configurations and (+), (-) configurations of glucose-Structure of fructose; Disaccharides: Sucrose-preparation, structure; Invert sugar- Structures of maltose and lactose- Polysaccharides: Structures of starch, cellulose and glycogen- Importance of carbohydrates; Amino acids: Natural amino acids-classification of amino acids-structures and D and L forms-Zwitterions; Proteins-Structures, classification, fibrous and globular- primary, secondary, tertiary and quaternary structures of proteins- Denaturation of proteins;

Enzymes: Enzymes, mechanism of enzyme action; **Vitamins:** Explanation-names- classification of vitamins - sources of vitamins-deficiency diseases of different types of vitamins; **Nucleic acids:** chemical composition of nucleic acids, structures of nucleic acids, DNA fingerprinting biological functions of nucleic acids;

Hormones: Definition, different types of hormones, their production, biological activity, diseases due to their abnormal activities.

Unit-23: CHEMISTRY IN EVERYDAYLIFE- Drugs and their classification: (a) Classification of drugs on the basis of pharmacological effect (b) Classification of drugs on the basis of drug action (c) Classification of drugs on the basis of chemical structure (d) Classification of drugs on the basis of molecular targets; Drug-Target interaction-Enzymes as drug targets (a) Catalytic action of enzymes (b) Drug-enzyme interaction Receptors as drug targets; Therapeutic action of different classes of drugs: antacids, antihistamines, neurologically active drugs: tranquilizers, analgesics- non- narcotic, narcotic analgesics, antimicrobials-antibiotics, antiseptics and disinfectants-antifertility drugs; Chemicals in food- artificial sweetening agents, food preservatives, antioxidants in food; Cleansing agents-soaps and synthetic detergents

Unit-24:HALO ALKANES AND HALO ARENES: Classification and nomenclature; Nature of C-X bond; Methods of preparation: Alkylhalides and arylhalides-from alcohols, from hydrocarbons (a) by free radical halogenation (b) by electrophilic substitution (c) by replacement of diazonium group (Sandmeyer reaction) (d) by the addition of hydrogen halides and halogens to alkenes-by halogen exchange reactions (Finkelstein reaction); Physical properties-melting and boiling points, density and solubility; Chemical reactions: Reactions of haloalkanes (i) Nucleophilic substitution reactions (a) S_N2 mechanism (b) S_N1 mechanism (c) stereo chemical aspects of nucleophilic substitution reactions-optical activity (ii) Elimination reactions (iii) Reaction with metals-Reactions of haloarenes: (i) Nucleophilic substitution (ii) Electrophilic substitution and (iii) Reaction with metals;

Polyhalogen compounds: Uses and environmental effects of dichloro methane, trichloromethane, triiodomethane, tetrachloro methane, freons and DDT

Unit-25: ORGANIC COMPOUNDS CONTAINING C, H AND O (ALCOHOLS, PHENOLS, ETHERS, ALDEHYDES, KETONES AND CARBOXYLIC ACIDS):

Alcohols, Phenols and Ethers: Alcohols, phenols and ethers-classification; Nomenclature: (a) Alcohols, (b) phenols and (c) ethers; Structures of hydroxy and ether functional groups; Methods of preparation: Alcohols from alkenes and carbonyl compounds, from Grignard reagents; Phenols from haloarenes, benzene sulphonic acid, diazonium salts, cumene; Physical properties of alcohols and phenols; Chemical reactions of alcohols and phenols (i) Reactions involving cleavage of O-H bond in alcohols-Acidity of alcohols and phenols, esterification (ii) Reactions involving cleavage of C-O bond-reactions with HX, PX_3 , dehydration and oxidation (iii) Reactions of phenols-electrophilic aromatic substitution, Kolbe's reaction, Reimer - Tiemann reaction, reaction with zinc dust, oxidation;

Commercially important alcohols (methanol, ethanol)

Ethers-Methods of preparation: By dehydration of alcohols, Williamson synthesis-Physical properties-Chemical reactions: Cleavage of C-O bond and electrophilic substitution of aromatic ethers (anisole).

Aldehydes and Ketones: Nomenclature and structure of carbonyl group; Preparation of aldehydes and ketones-(1) by oxidation of alcohols (2) by dehydrogenation of alcohols (3) from hydrocarbons -Preparation of aldehydes (1) from acyl chlorides (2) from nitriles and esters (3) from hydrocarbons-Preparation of ketones (1) from acyl chlorides (2) from nitriles (3) from benzene or substituted benzenes; Physical properties of aldehydes and ketones; Chemical reactions of aldehydes and ketones-nucleophilic addition, reduction, oxidation, reactions due to α -Hydrogen and other reactions (Cannizzaro reaction, electrophilic substitution reaction); Uses of aldehydes and ketones.

Carboxylic acids: Nomenclature and structure of carboxyl group; Methods of preparation of carboxylic acids (1) from primary alcohols and aldehydes (2) from alkyl benzenes (3) from nitriles and amides (4) from Grignard reagents (5) from acyl halides and anhydrides (6) from esters; Physical properties; Chemical reactions: (i) Reactions involving cleavage of O-H bond-acidity, reactions with metals and alkalis (ii) Reactions involving cleavage of C-OH bond- formation of anhydride, reactions with PCl_5 , PCl_3 , $SOCl_2$, esterification and reaction with ammonia (iii) Reactions involving-COOH group-reduction, decarboxylation (iv) Substitution reactions in the hydrocarbon part-halogenation and ring substitution; Uses of carboxylic acids.

Unit-26: ORGANIC COMPOUNDS CONTAINING NITROGEN:

Amines: Structure of amines; Classification; Nomenclature; Preparation of amines: reduction of nitro compounds, ammonolysis of alkyl halides, reduction of nitriles, reduction of amides, Gabriel phthalimide synthesis and Hoffmann bromamide degradation reaction; Physical properties; Chemical reactions: basic character of amines, alkylation, acylation, carbyl amine reaction, reaction with nitrous acid, reaction with aryl sulphonyl chloride, electrophilic substitution of aromatic amines (aniline)-bromination, nitration and sulphonation.

DIAZONIUM SALTS- Methods of preparation of diazonium salts (by diazotization); Physical properties; Chemical reactions: Reactions involving displacement of Nitrogen, reactions involving retention of di azo group –coupling reactions; Importance of diazonium salts in synthesis of aromatic compounds

Cyanides and Isocyanides:

Structure and nomenclature of cyanides and isocyanides; Preparation, physical properties and chemical reactions of cyanides and isocyanide

AP ICET-2024 ADMISSIONS

DETAILED NOTIFICATION

CERTIFICATE VERIFICATION AND OPTION EXERCISE FOR WEB BASED COUNSELLING

The Qualified and eligible candidates of AP ICET-2024 who are desirous of seeking admission into MBA/MCA Programmes are informed that the web counseling process will be as per the following schedule. The candidates are instructed to follow guidelines/Instructions to proceed with the web counseling process.

Subject	Dates
Publication of Notification	26 - 07 - 2024
Registration for web counselling	26 - 07 - 2024 To 01 - 08 - 2024
Verification of Certificates	27 - 07 - 2024 To 03 - 08 - 2024
For Candidates of Special Category (PH/CAP/NCC/Scouts & Guides/Sports & Games/Anglo Indians), the certificate verification will be done physically at HLC, Andhra Loyola College, Sentini Hospital Road, Veterinary Colony, Vijayawada	02 - 08 - 2024
Exercising of Web Options	04 - 08 - 2024 To 07 - 08 - 2024
Change of Web Options	08 - 08 - 2024
Allotment of seats for first phase counselling	10 - 08 - 2024
Reporting to colleges after first phase counselling	12 - 08 - 2024 To 16 - 08 - 2024
Commencement of Class Work	12 - 08 - 2024

Qualified and eligible candidates of AP ICET-2024 are informed to participate in web counseling for the seats available in universities and colleges in MBA and MCA programs in the State of Andhra Pradesh for the academic year 2024-25 on payment of processing fee as given below.

PAYMENT OF PROCESSING FEE:

(Before Online Certificate Verification)

1. Rs. 1200/- (for OC/BC) and Rs. 600/- (for SC/ST/PH) through online by credit card/ debit card/ (or) net banking through the "Pay Processing Fee" link in the web site <https://cets.apsche.ap.gov.in/>
2. All the candidates from 1st to Last Rank can pay the processing fee from **26 – 07 – 2024** onwards using URL <https://cets.apsche.ap.gov.in/>
3. For payment of the processing fee, please visit <https://cets.apsche.ap.gov.in/> and click on Pay Processing Fee.
4. Enter the AP ICET Hall Ticket number and rank and click on pay fee online.
5. The candidate will be directed to the payment gateway.
6. Select any one mode of payment i.e., credit card or debit card or net banking and enter credentials.
7. Once the payment is successful click on the print button and take a printout
8. Candidate shall note that he/she shall have paid the processing fee when candidate upload scanned copies of certificates i.e., the processing fee should be paid online by the candidate before he/she upload scanned copies of certificates.

THE FOLLOWING ARE THE SCANNED CERTIFICATES TO BE UPLOADED AT THE TIME OF REGISTRATION

- 1) AP ICET-2024 Hall Ticket
- 2) AP ICET-2024 Rank Card
- 3) Transfer Certificate (T.C.)
- 4) Degree Marks Memos/Consolidated marks memo
- 5) Degree Provisional Certificate
- 6) Intermediate Marks Memo/Diploma Marks memo
- 7) S.S.C. or its equivalent Marks memo
- 8) Study Certificates from Class IX to Degree
- 9) Residence Certificate (in case where candidate has no institutionalized

education) in respect of Private candidates of AP state.

- 10) Residence certificate of either of the parent in AP for 10 years excluding the period of employment outside Andhra Pradesh from the competent authority in respect of Non-Local Candidates.
- 11) Latest valid Income Certificate or Ration Card issued by the competent authority containing the name of the candidate
- 12) Caste Certificate issued by competent authority in respect of SC/ST/BC
- 13) Economically weaker section (EWS) certificate if applicable
- 14) Local status certificate if applicable i.e., a candidate who migrates to any part of the state of Andhra Pradesh from the state of Telangana within a period of Seven years from the 2nd day of June, 2014 shall be regarded as the local candidate in the state of Andhra Pradesh.

ELIGIBILITY TO MBA AND MCA PROGRAMS:

Candidates who secured 50% (For OC) and 45% (SC/ST/BC) aggregate marks in Degree or its equivalent examination are only eligible for admission.

Program	Eligibility
MBA	Any degree of minimum three-year duration with Mathematics as one of the subjects in SSC. Obtained at least 50% marks (45% marks in case of candidates belonging to reserved category) in the qualifying Examination.
MCA	Passed BCA/ Bachelor Degree in Computer Science Engineering or equivalent Degree. Obtained at least 50% marks (45% marks in case of candidates belonging to reserved category) in the qualifying Examination. (OR) Passed B.Sc./B.Com./B.A. with Mathematics at 10+2 Level or at Graduation Level (with additional bridge Courses as per the norms of the concerned University). Obtained at least 50% marks (45% marks in case of candidates belonging to reserved category) in the qualifying Examination.

Note:

1. All AP ICET-2024 qualified Candidates can exercise their options from any Internet cafe or Help Line Centre or from their Residence after

Certificates Verification on the mentioned dates as per the schedule.
The detailed Procedure of Exercising Options will be placed on the Website: <https://cets.apsche.ap.gov.in/>

2. Options will be frozen on **08 – 08 – 2024**
3. Allotment of seats will be placed in the Website on **10 – 08 – 2024**
4. For all other details please refer the Website.
5. Fee particulars and seats available under Convener Quota College wise will be available on the website <https://cets.apsche.ap.gov.in/> well before the commencement of Option Entry.
6. The Government (G.O.Ms.No.77 and its amendment G.O.Ms.No.4) ordered that in case of Post-Graduation courses, the (i) "Post Matric Scholarships (RTF)" and (ii) "Post Matric Scholarships (MTF)" schemes shall be applicable only to the students admitted under Convener quota in the Post Graduate programs/Courses offered by the State funded Universities and Government Degree/PG Colleges in the State of Andhra Pradesh from 2020-21. The above is not applicable in case of Post Graduate programs/courses to the students admitted under convener quota, either regular or self-finance mode, in the Private Aided and Private Unaided Degree/PG Colleges from the academic year 2020-21 fresh admissions.

Convener Office address:

CONVENER, AP ICET-2024 ADMISSIONS,
Andhra Pradesh State Council of Higher Education
2ND, 3rd, 4th and 5th floors, Neeladri Towers, Sri Ram Nagar,
6th Battalion Road, Atmakur (V), Mangalagiri (M),
Guntur-522503, Andhra Pradesh

Domain Contact Details:

Email-Id: convenorapicetadms2024@gmail.com

Help Line Numbers: **8639760741**

Technical Contact Details:

Help Line Number: **8008250472**

Date: 25 – 07 – 2024
Place: MANGALAGIRI

CONVENER
AP ICET-2024 ADMISSIONS



AP ICET-2024
Conducted on behalf of APSCHE by
SRI KRISHNADEVARAYA UNIVERSITY
ANANTHAPURAMU-515003



NOTIFICATION

Applications are invited for AP Integrated Common Entrance Test (APICET- 2024) for admission into first year **MBA/MCA** Courses for the Academic Year 2024-25. Eligible candidates may submit their applications through **online mode only** by paying registration and processing fee (Rs 650/- for OC & Rs. 600/- for BC and Rs.550/- for SC/ST Candidates) through online payment by using credit/debit card or Net banking. The detailed information about APICET- 2024 is available on the **website: <https://cets.apsche.ap.gov.in>**.

Commencement of Online submission of application: **06-03-2024**.

Details for submission of online application with late fee are available on the website.

Last date for submission of applications online without late fee:	07-04-2023
Date of Entrance Test	06-05-2024 & 07-05-2024
Time of the Test	09.00 AM to 11.30 AM & 02.30 PM to 5.00 PM

Place: Ananthapuramu

Date: 01-03-2024

CONVENOR
APICET-2024



ANDHRA PRADESH STATE COUNCIL OF HIGHER EDUCATION
(A Statutory Body of the Government of A.P)
3rd, 4th and 5th floors, Neeladri Towers, Sri Ram Nagar, 6th Battalion Road,
Atmakur (V), Mangalagiri (M), Guntur-522 503, Andhra Pradesh
Web: www.apsche.org. Email: chairman.apsche@gmail.com



Lr. No. APSCHE/CETs/EAPCET-2024/CAT-B/Non-NRI/Notification/1

Dt 29.07.2024

To

The Principals/Managements of Private Unaided Non-Minority Engineering Colleges

INSTRUCTIONS FOR FILLING UP CATEGORY-B (NRI/NON-NRI) SEATS UNDER MANAGEMENT QUOTA IN PRIVATE UNAIDED NON-MINORITY ENGINEERING COLLEGES OFFERING B.TECH FOR THE ACADEMIC YEAR 2024-25.

- Ref:- 1.GO Ms.No.32 Higher Education (EC.2) Department dated 27.08.2022.
2.GO Ms.No. 33 Higher Education (EC.2) Department dated 27.08.2022.
3. Lr. No. APSCHE/CETs/EAPCET-2024/CAT-B/NRI/Notification/1 dated 24.07.2024.

1. With a view to streamline the admission process in the interest of students, Government has decided to issue guidelines for admission into Category-B seats in Private Unaided Non-Minority Professional institutions to ensure admission to the eligible meritorious candidates in a fair, transparent and non-exploitative manner and in the public domain. Accordingly the government has issued GOs referred above.
2. In accordance with the relevant GOs, the Competent Authority i.e Chairman, Andhra Pradesh State Council of Higher Education hereby issues the guidelines for the academic year 2024-25, as furnished hereunder, for filling up the Category-B seats in Engineering Colleges in a transparent manner, based on the decisions taken in the matter and in consideration of the procedure evolved in the Government Orders.
3. A web portal has been designed for category-B admissions. The institutions may login to the portal <https://cets.apsche.ap.gov.in> and under the web page SPOT & CAT-B ADMISSIONS-2024 (College registration login).
4. Every institution will be provided with login credentials for accessing and utilizing the web portal for making Category-B admissions.
5. The schedule for Category-B admissions is furnished hereunder. The institutions shall stick to the schedule and complete the Category-B admission process.
6. User manual for Category-B admissions is also furnished in the web portal.
7. Lr. No. APSCHE / CETs / EAPCET-2024/CAT-B/NRI/ Notification/1 dated 24.07.2024, the institutions are requested to complete the Category-B (NRI) quota admissions and communicate the details to the Secretary, APSCHE.

8. For filling up of Category-B (Non-NRI) and unfilled NRI quota seats (converted to Non-NRI) the following is the schedule:

S.No.	Activity	Dates
1.	Date of issue of notification by the institutions	31.07.2024
2.	Commencement of receiving applications	01.08.2024
3.	Last date for entry of applicant details and payment of candidate registration fee in the web portal	05.08.2024
4.	Downloading the list of applicants (both candidates directly registered and registered at the institution)	06.08.2024
5.	Selection of the candidates as per the merit order as specified in the relevant Go.	07.08.2024
6.	Display of the selection list and uploading the selection list in the web portal	08.08.2024
7.	Last date for uploading the details of selected candidates along with supporting documents in the web portal.	13.08.2024

9. Institutions shall issue notification as specified in the relevant GO and accept applications online or in person and issue acknowledgement to the candidates.
10. Derive vacancies for Cat-B (Non-NRI) quota by entering branch wise NRI filled data in the portal.
11. The institution shall upload the data of both applications received online and in person in to the web portal as per schedule by paying the candidate registration fee through online mode as detailed below:

S. No.	CET Admissions	Registration Fee per candidate in Rs.
1	APEAPCET- CAT-B Non-NRI APEAPCET/JEE-2024 Qualified	Rs.1000/-
2	APEAPCET-CAT-B Non-NRI APEAPCET/JEE-2024 Not appeared / Not Qualified	Rs.1200/-

12. Institutions shall download the combined list of candidates applied to the institution or directly to the common web portal. The institution at its option uses the online merit generation facility available on the web portal. The merit list generated shall be in order of NRI quota, JEE (Mains) / NEET-2024 rankers, APEAPCET-2024 rankers and qualifying examination in order of merit as prescribed in the relevant GO.
13. The institutions that are approved by All India Council for Technical Education and permitted to fill NRI seats not exceeding 15% of the sanctioned intake in each course for the academic year shall admit NRI candidates (sons and daughters of NRIs) who have passed the qualifying examination with not less than 50% aggregate marks in the qualifying examination or Cumulative Grade Point Average (CGPA) equivalent to 5 on a scale of 10.

14. The remaining seats shall be filled on merit basis with candidates including from other states and union territories who have secured rank at JEE (Mains) / NEET-2024 and secured not less than 45% (40% in case of candidates belonging to reserved categories) of marks in the prescribed group subjects taken together/aggregate marks in the qualifying examination.
15. The seats remaining unfilled from the above categories shall be filled with eligible candidates, who have qualified in the APEAPCET -2024 examination on merit basis with candidates securing not less than 45% (40% in case of candidates belonging to reserved categories) of marks in the prescribed group subjects taken together/aggregate marks in the qualifying examination.
16. Thereafter, if any seats still remain unfilled, such seats may be filled on merit basis with candidates securing not less than 45% (40% in case of candidates belonging to reserved categories) of marks in the prescribed group subjects taken together / aggregate marks in the qualifying examination (+2 or its equivalent), as prescribed.
17. Institutions shall prepare branch wise selection list as per the merit of the candidate and upload into the web portal along with the supporting documents for verification and ratification by the Competent Authority.
18. In case of unfilled seats if any, the concerned college may admit candidates from out of left over candidates in order of merit from the merit list. After completion of the admission process, the institutions shall forward the list of admitted candidates for approval by the Competent Authority as per the prescribed schedule.
19. The Managements shall close all admissions in compliance of the judgment of Hon'ble Supreme Court of India.
20. The Competent Authority shall have the authority to impose fine or to initiate action or both for violation of Instructions as per the G.O's in vogue.

For any queries related to Category-B admissions please send e-mail to specialofficerapsche@gmail.com

Help Line No. 9100998069

Sd/-
CHAIRMAN (I/C) & COMPETENT AUTHORITY

Copy to:
The Secretary, APHERMC

GOVERNMENT OF ANDHRA PRADESH
DEPARTMENT OF TECHNICAL EDUCATION
APEAPCET-2025 ADMISSIONS
PRESS NOTE

Sir / Madam

Admission Committee meeting of APEAPCET – 2025 admissions was convened by the Convenor & Director of Technical Education APEAPCET-2025 admissions, Sri G.Ganesh Kumar, IAS, at APSCHE, i.e., on 03.07.2025. The admission schedule for APEAPCET - 2025 is as follows:

1) Admissions Schedule for Web Counselling:

SNO	ACTIVITY	DATES
1	Date of issue of Notification	04.07.2025
2	Date of Publication in News papers	05.07.2025
3	Registration Cum Payment of Processing Fee	07.07.2025 to 16.07.2025
4	Verification of uploaded Certificates (Online)at HLCs	07.07.2025 to 17.07.2025
5	Dates of Web Options Entry	10.07.2025 to 18.07.2025
6	Change of Web Options	19.07.2025
7	Release of Seat Allotment	22.07.2025
8	Self-Joining & Reporting at allotted colleges	23.07.2025 to 26.07.2025
9	Attending for Classes at college	04.08.2025

2) The candidates are advised to keep the following certificates ready for verification for Web Counselling.

- Processing fee (Online payment) receipt
- APEAPCET- 2025 Rank Card
- APEAPCET- 2025 Hall Ticket
- S.S.C. or its equivalent Marks memo.
- Intermediate or its equivalent
- VI to XII Study Certificates
- Transfer Certificate(TC) from the College last studied

- Income Certificate issued after 01.01.2022 by competent authority or White ration card for claiming tuition fee reimbursement, if applicable.
- Caste Certificate issued by competent authority in case of reserved candidates(BC/SC/ST).
- Economically Weaker Section (EWS) Certificate (if applicable) for the year 2025-26.
- Persons With bench mark disability (PWD) / Children of Armed Personnel (CAP) / NCC / SPORTS&GAMES / SCOUTS&GUIDES/Minority Certificate, if applicable.
- Local status certificate (if applicable) i.e. a candidate who migrates to any part of the state of Andhra Pradesh from the state of Telangana from 02-June-2014 to on/before 01-June-2024 shall be regarded as the local candidate in the state of Andhra Pradesh.
- Residence certificate for preceding 7 years of the Qualifying examination i.e. SSC or its equivalent in respect of Private candidates (in case where the candidate has no institutionalized education).
- Residence certificate(not Nativity) of ether of parents for 10 years in Andhra Pradesh issued by revenue officials or Service certificate from State/Central/Public Sector Units/Quasi Govt. Organizations if either of parents is working currently in Andhra Pradesh -. In case of non-local candidates

3) CONVENOR'S OFFICE ADDRESS:

THE CONVENER,
APEAPCET-2025 ADMISSIONS,
FLAT.NO:501, GARUDADRI KK TOWERS,
MANGALAGIRI, GUNTUR DIST-522 503.

4) Convenor Office Contact Details:

Email Id: convenorapeapcet2025@gmail.com

Help Desk Numbers: 7995681678, 7995865456 and 9177927677

(Timings as per the schedule from 9:00 AM to 5:00 PM)

**CONVENOR & DTE
EAPCET-2025 ADMISSIONS**

*Vm/aw
03/07/25*



**ANDHRA PRADESH STATE COUNCIL OF HIGHER EDUCATION
(A Statutory Body of the Government of A.P)**

3rd, 4th, 5th floors, Neeladri Towers, Sri Ram Nagar, 6th Battalion Road,
Atmakur (V), Mangalagiri (M), Guntur-522 503, Andhra Pradesh
<https://apsche.ap.gov.in>. Email: secretary@apsche.org



**PROCEEDINGS OF THE COMPETENT AUTHORITY AND THE CHAIRMAN,
ANDHRA PRADESH STATE COUNCIL OF HIGHER EDUCATION, GUNTUR**

=====

**PRESENT : PROF. K. MADHUMURTHY
CHAIRMAN**

Procs.No. APSCHE-CETs-APEAPCET-MQ-Cat-B-Non-NRI/2025 Dt. 7-10-2025

Sub: APSCHE – CETs Section – APEAPCET-2025 – Operating Guidelines for filling Up of Management quota seats under Category-B in Private Unaided Minority and Non-Minority Engineering Colleges offering B.Tech. for the academic year 2025-26 – issued – regarding.

Ref: 1. G.O.Ms.No. 74 Higher Education Department dated 28-7-2011
2. G.O.Ms.No. 11 Higher Education Department dated 17-3-2017
3. G.O.Ms.No. 32 Higher Education Department dated 27-8-2022
4. G.O.Ms.No. 33 Higher Education Department dated 27-8-2022
5. G.O.Ms.No. 20 Higher Education Department dated 12-5-2025
6. Orders of the Hon'ble High Court in WP No. 16290 of 2007 and
7. Orders of the Hon'ble High Court WP No.2105 of 2023.

-oOo-

ORDER:-

The Hon'ble High Court in WP No. 16290 of 2007 and WP No. 2105 of 2023 underscored the pivotal role of the Competent Authority in regulating admissions to unaided institutions and for issuing operating guidelines. In compliance with the orders of the Hon'ble High Court, the Competent Authority and the Chairman, Andhra Pradesh State Council of Higher Education hereby issued the following operating guidelines for admission of candidates into APEAPCET – 2025 under Management Quota in Private Unaided Minority and Non-Minority Professional institutions to ensure admission to the eligible meritorious candidates in a fair, transparent and non-exploitative manner.

1. The Competent Authority will issue admission schedule along with the guidelines for filling up of seats under spot quota and Management quota seats for each CET -2025 and they are binding to all Managements of the Colleges and Students.
2. The college shall publish a notification in widely circulated English and Telugu, newspapers indicating the availability of Category-B seats, program-wise intake, eligibility, schedule for application, and fee details.
3. A web portal has been designed for category-B admissions. The institutions may login to the portal <https://cets.apsche.ap.gov.in> and access SPOT & CAT-B ADMISSIONS 2025 (College registration login).

4. The login credentials for accessing and utilizing the web portal for making Category-B admissions will be provided to every institution. The user manual for Category-B admissions will be provided in the web portal.
5. The College shall fill up the Category-B – NRI Quota admissions and unfilled NRI quota seats (converted to Non- NRI) as per the schedule.
6. The institutions that are approved by All India Council for Technical Education and permitted to fill NRI seats not exceeding 15% of the sanctioned intake in each course for the academic year shall admit NRI candidates (sons and daughters of NRIs) who have passed the qualifying examination with not less than 50% aggregate marks in the qualifying examination or Cumulative Grade Point Average (CGPA) equivalent to 5 on a scale of 10.
7. The Institutions shall also accept applications online or in person and issue acknowledgement to the candidates.
8. The EAPCET Category-B admission procedure involves the following steps to be performed by the college Managements.

- Step 1 : Derive Vacancy
- Step 2 : Registration of Candidate
- Step 3 : Payment of processing fee

9. The College shall derive vacancies for Cat-B (Non-NRI) quota by entering branch wise NRI filled data in the portal.
10. The Institutions shall enter the program-wise sanctioned intake, fee fixed by APHERMC, and special category seat matrix on the APSICHE portal using their login credentials and digital key. Once data is submitted and verified, no changes are allowed.
11. The institution shall upload the data of the applications received in person into the web portal as per schedule by paying the candidate registration fee through online mode as detailed below:

S. No.	CET Admissions	Registration Fee per candidate in Rs.
1	APEAPCET- CAT-B Non-NRI APEAPCET-2025 Qualified	Rs.1000/-
2	APEAPCET-CAT-B Non-NRI APEAPCET-2025 - Not appeared / Not Qualified	Rs.1200/-

12. The College shall verify original certificates, as given hereunder, before preparation of merit list of the candidates, before confirming admission. Only eligible candidates should be admitted and upload in the portal for ratification of admissions by the Competent Authority. Admission shall be provisional until data is uploaded and approved by APSICHE.

(a) SSC Certificate

- (b) Intermediate vocational candidates shall have passed Bridge course in Mathematics / Biological Sciences and Physical Sciences conducted by Board of Intermediate Education, AP
- (c) Residence Certificate (if applicable)
- (d) APEAPCET- 2025 Rank Card (if qualified)
- (e) APEAPCET-2025 Hall Ticket (if qualified)
- (f) Caste Certificate
- (g) Transfer Certificate
- (h) EWS Certificate (if applicable)

Note: The candidates possessing the qualifying examination certificate recognized as equivalent to Intermediate by Board of Intermediate Education of Andhra Pradesh shall alone be considered for admission.

13. The Colleges / Institutions shall prepare branch wise selection list as per the merit and eligibility of the candidate and upload into the web portal along with the supporting documents for verification and ratification by the Competent Authority.
14. The seats remaining unfilled, after filling up of seats under NRI quota, shall be filled with eligible candidates, who have qualified in the APEAPCET - 2025 examination on merit basis with candidates securing not less than 45% (40% in case of candidates belonging to reserved categories) of marks in the prescribed group subjects taken together/aggregate marks in the qualifying examination.
15. Thereafter, if any seats still remain unfilled, such seats may be filled on merit basis with candidates securing not less than 45% (40% in case of candidates belonging to reserved categories) of marks in the prescribed group subjects taken together / aggregate marks in the qualifying examination (+2 or its equivalent), as prescribed.
16. Candidates who satisfy the definition of Local/Non-Local shall alone be granted admission in the first priority.
17. Candidates whose intermediate is from other state but either of the parents resided for a period of 10 years in A.P state are eligible for Spot Admissions.
18. Candidates possessing the qualifying examination certificate recognized as equivalent to Intermediate by the Board of Intermediate Education, A.P., shall be asked to get the equivalency certificate from A.P.BIE before granting admission.
19. The Competent Authority will verify the list of admitted candidates and validate the same with reference to the GOs and as per the prescribed procedures.
20. The Competent Authority shall approve and ratify the validated list and communicate the proceedings to the college concerned.
21. The Candidates shall report to the institution within the given timeline, pay the prescribed fee, and complete the admission formalities. The institution shall confirm the admission on the portal.

22. The remaining seats shall be filled on merit basis with candidates including from other states and union territories who have secured rank at JEE (Mains) and secured not less than 45% (40% in case of candidates belonging to reserved categories) of marks in the prescribed group subjects taken together/aggregate marks in the qualifying examination.
23. In case of unfilled seats if any, the concerned college may admit candidates from out of left over candidates in order of merit from the merit list. After completion of the admission process, the institutions shall forward the list of admitted candidates for approval by the Competent Authority as per the prescribed schedule.
24. The candidates admitted under Cat-B Quota are not eligible for fee reimbursement.
25. The Institutions shall collect only the fee approved and notified by the Andhra Pradesh Higher Education Regulatory and Monitoring Commission (APHERMC). No donation or capitation fee in any form shall be collected. Any violation will invite strict penal action, including cancellation of admissions, fine, and withdrawal of affiliation.
26. The Competent Authority shall have the authority to impose fine or to initiate action or both for violation of Instructions as per the G.O's in vogue.
27. If any deficiencies found during validation of admitted lists, the college concerned shall rectify the deficiencies within a stipulated time as per the schedule and obtain ratification of such admitted candidates.
28. The admitted candidates who have not fulfilled the required eligibility conditions will summarily be rejected by the Competent Authority.
29. The College shall adhere to the tentative schedule for conducting CAT-B (Non-NRI) admissions in APEAPCET-2025.

SI.No	Description	From	To
1	Notification issued by the college	18-10-2025	
2	Admission process	19-10-2025	23-10-2025
3	Preparation of list of selected candidates	24-10-2025	25-10-2025
4	Uploading of admissions into the portal	26-10-2025	29-10-2025
5	Payment of Ratification fee	26-10-2025	29-10-2025
6	Ratification of admissions process and issue of initial Proceedings by the Competent Authority	30-10-2025	3-11-2025
7	Rectification of discrepancies in the uploaded certificates	4-11-2025	5-11-2025
8	Final Phase of issuing proceedings	6-11-2025	
9	Closing date of Portal	7-11-2025	

30. The College shall
- (i) Comply the Management quota admission schedule issued by the Competent Authority.
 - (ii) Upload admitted students' data promptly in the APSCHE portal as per schedule.
 - (iii) Take ratification of admissions prior to commencement of class work
31. The College shall not
- (a) admit students beyond the sanctioned intake and beyond the prescribed schedule.
 - (ii) allow the students to attend class without the approval of the admission from the competent authority.
 - (iii) conduct management quota admissions without APSCHE approval.
 - (iv) admit students without verifying original certificates and other supporting documents.
 - (v) collect excess fees or amounts not prescribed by APSCHE or APHERMC.
 - (vi) violate rules issued by the Government / Competent Authority.
 - (vii) continue any candidates who are not present in the current list of allotments. They shall be directed to report to the institution they are allotted, immediately.
32. Further, the College shall follow the above guidelines scrupulously and in case of any doubt they are requested to contact **9100998069 (or) coordinatorcets@apsche.org**.

Note: These Guidelines are not applicable for University Engineering colleges and self-financed programs of Universities.

COMPETENT AUTHORITY &
CHAIRMAN – APSCHE

/ BY ORDER /


SECRETARY-APSCHE

7.10.25

To
The Management of the Engineering
Colleges offering Engineering programs

Copy to: CETs Section, APSCHE

AP STATE COUNCIL OF HIGHER EDUCATION

APEAPCET–2024 SPOT(CONVENER) ADMISSIONS

From
The Chairman(i/c) & Competent Authority,
A.P.State Council of Higher Education

To
The Principals, Private Unaided
Engineering Colleges in AP

Letter No. APEAPCET–2024/SPOT ADMNS/CAT-A/1, Dated: 18-09-2024

Sir/Madam,

Subject: APEAPCET-2024 Engineering Admissions–Communication of guidelines to fill the leftover vacancies during Institutional Spot Admissions (CAT-A) – Reg.

* * *

The Principals of all Private Unaided Engineering Colleges in AP state are informed that EAPCET-2024 Admissions are completed and reported by 12-09-2024.

You are requested to fill up the left over and dropout vacancies by conducting Spot Admissions on or before 26-09-2024.

Principals are requested to comply with the following sequence of operations:

1. Collect original certificates from candidates for causing verification and the tuition fee admissible.
2. Update the joining details by logging into <https://cets.apsche.ap.gov.in> with the user ID already being used for updating joining details.
3. Derive Spot Vacancy. The unfilled and not joined / dropout vacant seats will now become vacancies for Spot admissions.
4. Conduct internal sliding to eligible candidates/branches. For this uncheck the check box against the candidate whom you are going to internally slide him/her to newer branch. Click on internal sliding, enter the hall ticket number and perform internal sliding.
5. Candidate's who are not in current list of allotments shall not be continued and they shall be directed to report at the new institution/course into which they were re-allotted during final phase of allotments based on their option.

6. If any candidate now wishes to cancel his/her allotment, they shall be permitted to do so and his name shall be unchecked from the list of candidates joined before deriving spot admissions.
7. In your college login under the college tab, details of vacancies after convener admissions are provided. The vacancies in EWS category belongs to OC category only. Principals are requested to fill these vacancies with EWS candidates (local to AU or SVU) having valid EWS certificate and these vacancies (being supernumerary) shall not be diverted to other categories if they are not filled.
8. How to arrive at the vacancy position?
- 8.1 Unfilled vacancies at the end of Phase-3 are placed in respective college login portals of <https://cets.apsche.ap.gov.in>
- 8.2 Deduct the number of vacancies filled due to re-allotment from one branch to another branch (internal sliding) and add the resultant vacancies.
- 8.3 The vacant seat shall be filled through internal sliding with the same category candidate on merit of respective CET-2024 rank.
- 8.4 If same category candidate is not available, seat shall be filled with the candidate as per seat conversion matrix given below

Table-1

If seat is vacant in	Converted in to	Converted into	Converted into	Converted in to	Converted into	Converted into
OC General						
OC Women	OC General					
BC-A General	BC-B General	BC-C General	BC-D General	BC-E General		
BC-B General	BC-C General	BC-D General	BC-E General	BC-A General		
BC-C General	BC-D General	BC-E General	BC-A General	BC-B General		
BC-D General	BC-E General	BC-A General	BC-B General	BC-C General		
BC-E General	BC-A General	BC-B General	BC-C General	BC-D General		
BC-A Women	BC-A General	BC-B General	BC-C General	BC-D General	BC-E General	Un reserved/ Open Category
BC-B Women	BC-B General	BC-C General	BC-D General	BC-E General	BC-A General	
BC-C Women	BC-C General	BC-D General	BC-E General	BC-A General	BC-B General	
BC-D Women	BC-D General	BC-E General	BC-A General	BC-B General	BC-C General	
BC-E Women	BC-E General	BC-A General	BC-B General	BC-C General	BC-D General	
ST General	SC General					
ST Women	ST General	SC General				
SC General	ST General					
SC Women	SC General	ST General				
EWS Women	EWS General	No Conversion				

Please comply the following scrupulously:

1. Issue a Notification in a Daily News paper indicating the date of Spot Admissions.
2. The vacancies are to be filled first with those qualified in APEAPCET-2024 and possessing 45% and above for OC and 40% and above for BC/SC/ST in aggregate/ in the prescribed group subjects of relevant qualifying examination (Inter). In case of Inter vocational candidates, the candidates shall have passed bridge course in Mathematics / Biological Sciences and Physical Sciences conducted by Board of Intermediate Education, AP.
3. If the vacancies are still left, Candidates who have passed the qualifying Examination with 45% and above for OC, 40% and above for BC/SC/ST in aggregate/ in the prescribed group subjects are to be considered.
4. Candidates who satisfy the definition of Local/Non-Local shall alone be granted admission. Candidates whose qualifying examination is from other state [For this purpose, Telangana is not other state] but either of the parents resided for a period of 10 years in A.P/Telangana state are eligible for Spot Admissions.
5. Candidates possessing the qualifying examination certificate recognized as equivalent to Intermediate by Board of Intermediate Education of Andhra Pradesh shall alone be considered for admission.

6. Certificates to be Verified:

- Qualifying Examination Marks Memos and Provisional Pass Certificate
- SSC Marks Memo or equivalent
- Intermediate vocational candidates shall have passed Bridge course in Mathematics / Biological Sciences and Physical Sciences conducted by Board of Intermediate Education, AP
- Study Certificate.
- Residence Certificate (if applicable)
- Caste Certificate (if applicable)
- Aadhaar number (not mandatory)
- EWS certificate (if applicable)

Upload all the above certificates of candidates for verification and for ratification of spot admissions made by the managements of private engineering & pharmacy colleges. Principals are requested to collect the following processing fee from each candidate admitted through spot admissions and remit to APSCE through online payment gateway.

Status of Candidate	Registration Fee per candidate (for All Categories)
Qualified in EAPCET 2024	Rs.1200/-
Not qualified /Not appeared in EAPCET 2024	Rs.1800/-

7. The Vacancy seats may be filled as per the merit order as shown in Table1. First preference shall be given to CET qualified candidates and then remaining seats for those with requisite percentage of marks in aggregate/ in the group subjects in the qualifying examination.
8. Uploading spot admissions in the web portal i.e. <https://cets.apsche.ap.gov.in> shall be done on or before 26-09-2024.
9. After entering details of candidates admitted under spot admissions in the web portal, take print out of the same. The list shall be signed by the Principal for the future purpose.
- 10. Please note that the Students admitted through Spot Admissions (i.e.) leftover seats of the Convener quota in the Institutional Spot Admissions are not eligible for Tuition Fee Reimbursement Vide G.O.Ms.No.66 Social Welfare (SW.EDN.2) Department Dated 08.09.2010.**
11. Further, the Principal is requested to follow the above guidelines scrupulously and in case of any doubt they are requested to contact 9100998069 or specialofficerapsche@gmail.com

Table-2

ACTIVITY	DATE
LAST DATE FOR UPDATING THE CONVENER ADMITTED CANDIDATES ADMISSIONS STATUS BY COLLEGES	12-09-2024
INTERNAL SLIDING	19-09-2024
DERIVING SPOT VACANCIES	20-09-2024
UPLOADING OF SPOT ADMISSIONS IN WEB PORTAL WITHOUT LATE FEE	21-09-2024 TO 26-09-2024
PAYMENT OF PROCESSING FEE THROUGH PAYMENT GATEWAY WITHOUT LATE FEE	21-09-2024 TO 26-09-2024
UPLOADING OF SPOT ADMISSIONS IN WEB PORTAL WITH LATE FEE OF Rs.2000/- PER DAY	27-09-2024 TO 28-09-2024
PAYMENT OF PROCESSING FEE THROUGH PAYMENT GATEWAY WITH LATE FEE OF Rs.2000/- PER DAY	27-09-2024 TO 28-09-2024

GOVERNMENT OF ANDHRA PRADESH
ABSTRACT

Higher Education – Andhra Pradesh State Council for Higher Education/CETs-EAPCET-2024 – Permission for conduct of 3rd and final round of web counselling for APEAPCET– 2024 for filling vacant seats as a special case only for this Academic Year 2024-25 as one-time measure – Accorded -Orders- Issued.

HIGHER EDUCATION (EC) DEPARTMENT

G.O.Rt.No.131

Date:14.08.2024

Read the following:-

1. G.O.Ms.No.74, Higher Education (EC.2) Dept., dt. 28.07.2011.
2. From the Private Engineering Colleges Managements' Association, Tadigadapa, Vijayawada Lr.No., Dt.06.08.2024.
3. From the Director of Technical Education, E-office file No. 2525842 received on 13.08.2024.

Order:

In the circumstances reported by the Director of Technical Education-AP, Mangalagiri & the Convenor for APEAPCET 2024-25 admissions in the reference 3rd read above, after careful examination of the matter, Government hereby accord permission to the Director of Technical Education, A.P., & the Convenor for APEAPCET 2024-25 admissions for conducting 3rd and final round of web counselling for APEAPCET - 2024-25 on par with 1st round and 2nd round of web counselling, for filling of vacant seats, as a special case for this Academic Year 2024-25 as one time measure, as per the following schedule:

S.No	ACTIVITY	DATES
1	Date of issue of Notification	16.08.2024
2	Date of Publication in News papers	17.08.2024
3	Commencement of Online payment of processing fee	19.08.2024 to 21.08.2024
4	Certificate verification (Online) at HLCs	19.08.2024 to 22.08.2024
5	Dates of Option Entry	20.08.2024 to 22.08.2024
6	Change of options	23.08.2024
7	Processing of allotments	24.08.2024 to 25.08.2024
8	Allotment of seats	26.08.2024
9	Self-Report & Reporting at allotted college	26.08.2024 to 30.08.2024

(PTO)

:: 2 ::

3. The Director of Technical Education, A.P., & the Convenor-APEAPCET admissions and the Secretary, Andhra Pradesh State Council for Higher Education, Mangalagiri shall take further action in the matter.

(BY ORDER AND IN THE NAME OF THE GOVERNOR OF ANDHRA PRADESH)

**SAURABH GAUR
SECRETARY TO GOVERNMENT**

To

The Director of Technical Education, AP & the Convenor-APEAPCET admissions, Mangalagiri.

The Secretary, Andhra Pradesh State Council for Higher Education, Mangalagiri.

Copy to:-

The Principal Secretary to Government, Social Welfare Department.

The OSD to Minister for HRD, AP Secretariat, Amaravati.

The PS to Principal Secretary to Government, Higher Education Department

SC/SF.

// FORWARDED :: BY ORDER //

E. Goutham Kumar
SECTION OFFICER

**GOVERNMENT OF ANDHRA PRADESH
ABSTRACT**

Social Welfare Department - Post Matric Scholarships - Reimbursement of tuition fee – Operational Guidelines to change the mode of disbursement of RTF from 2024-2025 Academic year–Modification Orders - Issued.

SOCIAL WELFARE (EDU.I) DEPARTMENT

G.O.MS.No. 87

Dated: 20-11-2024

Read the following:-

1. G.O.Ms.No.76, Social Welfare (EDU.I) Department, Dated:21.11.2023.
2. e-file bearing No.SOW02-16021/54/2024-D1 SEC-COSW (Computer No. 2518574) of the Director of Social Welfare, AP., dt.22.09.2024.

<<>>

ORDER:

In the circumstances reported by the Director of Social Welfare, AP., in the reference 2nd read above and in modification to the orders issued vide reference 1st read above, after careful examination of the matter, Government hereby order the following:

- i) From 2024-25 AY onwards, the RTF amounts of all the students, other than SCs, shall be released to the respective accounts of the colleges as per guidelines.
 - ii) From 2025-26 AY onwards, RTF amounts of all students, other than SC students, shall be released to the Colleges accounts, subject to FRS attendance in the Colleges.
 - iii) In respect of SC students, the RTF amounts will be continued to be released to the student accounts, as per GoI guidelines, since 60 % of the amount is borne by GoI.
2. The Higher Education Department shall take necessary action for commencement and effective implementation of FRS attendance system to capture attendance of the all the students accordingly.
 3. The CEO, APCFSS is directed to make necessary modifications in the software accordingly.
 4. The Director of Social Welfare, A.P., Tadepalli, shall take further necessary action accordingly in coordination with the concerned stakeholders.

(BY ORDER AND IN THE NAME OF THE GOVERNOR OF ANDHRA PRADESH)

**K.KANNA BABU
SECRETARY TO GOVERNMENT**

To
The Director of Social Welfare,A.P., Tadepalli.

(PTO)

::2::

The Principal Secretary to Government, Higher Education Department.

All Secretariat Departments.

All Head of the Departments.

All VC& Managing Directors of concerned Corporation.

All Vice-Chancellors of Universities in the State.

All Affiliating Authorities in the State.

All District Collectors in the State.

The Chief Executive Officer, A.P.C.F.S.S., Amaravati at Mangalagiri.

The Director of Treasuries and Accounts, A.P., Amaravati at Mangalagiri.

The Pay & Accounts Officer, Vijayawada.

The Accountant General, A.P., Vijayawada.

Copy to:

The General Administration(Cabinet) Department.

The CEO, AP CFSS, Mangalagiri.

The CEO, APCFMS, Amaravati, Mangalagiri.

All Registrars of Universities in the State.

OSD to Chief Secretary to Govt., A.P. Secretariat.

P.S. to Secretary to C.M.

P.S. to M (SW) /M/(TW)/M(BCW) /M(MW)/ M (WCD & DW)/M(HRD).

SF/Sc(2571851).

// FORWARDED:: BY ORDER//

SECTION OFFICER



ANDHRA PRADESH STATE COUNCIL OF HIGHER EDUCATION
(A Statutory Body of the Government of A.P)
III, IV & V Floors, Neeladri Towers, Sri Ram Nagar,
6th Battalion Road, Atmakur (V), Mangalagiri (M)
Guntur – 522 503, Andhra Pradesh
Web: www.apsche.org. Email: academiccell@apsche.org



APSCHE/AC/Online admns/Mgmt quota/Pvt Colleges/2021-22

Dt:09.01.2022

Circular

Sub: Online Admissions in Private Unaided Degree Colleges-Filling seats through Category B Management quota – Last date for uploading of admission details and certificates is 20.01.2022 – Reg
Ref: Reply to Legal Notice by Standing Counsel of APSCHE Dt: 28.12.2021

* * *

In continuation of reference, the Managements of Private Unaided Degree Colleges and Private Aided Degree Colleges with Unaided programmes are informed that the details of candidates admitted under 30% Management quota are to be uploaded through the college login in the OAMDC portal from 12.01.2022.

The last date for uploading of admission details along with relevant documents is 20.01.2022.

SECRETARY

**GUIDELINES FOR FILLING 30% MANAGEMENT QUOTA SEATS BY DEGREE
COLLEGES FOR 2021-22**

1. The seats available under Management quota for the programmes offered by the institutions can be accessed through the OAMDC portal
2. Candidates with the prescribed 35% of marks in the qualifying examination are eligible for admission under 30% Management quota as per merit.
3. Eligibility criteria prescribed in G.O Ms.34 HE (CE) Dept Dt:15.10.2020 and G.O Ms.No.56 HE (CE) Dept Dt:20.10.2021 followed for making admissions under convener quota shall be strictly followed for making admissions under Management quota and the admission is liable for cancellation and action will be initiated against the institution in case of violation.
4. Candidates who are Indian Nationals shall alone be granted admission.
5. Candidates possessing the qualifying examination certificate recognized as equivalent to Intermediate by Board of Intermediate Education of Andhra Pradesh shall be considered for admission. However 2/3 year Diploma Holders of NG Ranga Agricultural University and Dr.YSR Horticulture University are eligible for admission into general UG Programmes in accordance with G.O Rt. No.17 HE (CE A1) Dept Dt:10.02.2021
6. While admitting candidates under 30% Management quota, original certificates are to be verified and attested photocopies of certificates only are to be collected. The College shall return the original certificates to the candidates immediately after verification. However, the candidates shall produce the original certificates as and when required by the institution. Under no circumstances the college shall retain the original certificates with them, with the exception of TC and CC.
7. Colleges shall charge tuition fee for Management quota seats as proposed by them to the Council in response to the notification issued vide Cir.No.APSCHE/AC/UG Online Admissions/2021-22/2 Dated: 08.10.2021 which is displayed in the OAMDC portal. However, the fee

to be paid by the students or to be reimbursed by the Government is subject to the outcome of any legal remedy taken by the Government/APSCHE in the Hon'ble High Court/Hon'ble Supreme Court.

8. The list of admitted candidates as per the order of merit are to be uploaded along with documental proofs for scrutiny and ratification of admission. The list of certificates which are to be uploaded are:

- Qualifying examination marks memo and provisional pass certificate
- Certificate of pass in Bridge course in respect of Intermediate vocational candidates
- Study Certificate
- Caste Certificate, if applicable
- Undertaking by the candidate that he/she is not admitted under Convener quota or is willing to forego admission allotted under Convener quota, provided admission is given under Management quota

9. The processing fee per student who is admitted under 30% Management quota is Rs.500/- till 20.01.2022 and late fee fine of Rs.100/- will have to be paid per admission, for admissions made till 22.01.2022.

10. Students who confirmed their admission in Convener quota can get admitted into Management quota, provided they cancel their seat under Convener quota and give an undertaking to that effect. The Managements shall upload the undertaking of such candidates along with their certificates.

-oOo-



ANDHRA PRADESH STATE COUNCIL OF HIGHER EDUCATION
(A Statutory Body of the Government of A.P)
III, IV & V Floors, Neeladri Towers, Sri Ram Nagar,
6th Battalion Road, Atmakur (V), Mangalagiri (M)
Guntur – 522 503, Andhra Pradesh



Web: www.apsche.org. Email: secretaryapsche@gmail.com

OAMDC-2024-25

ADMISSIONS INTO GENERAL UG PROGRAMMES

(B.A., B.Sc., B.Com., BBA., B.Voc., BCA, BBA, BFA, 5-year integrated PG programmes with Intermediate qualification etc. (excluding Engineering and Pharmacy streams)

Notification for Online Admissions-2024-25

As per G.O Ms. No. 34 Higher Education Dt: 15-10-2020, Online Admission Process was introduced for admission into Under Graduate Programmes offered by the Degree Colleges in the state to promote merit, achieve excellence, curb malpractices, implement reservations, conduct fair, non-discriminatory and merit based admissions in a transparent basis in the larger interest and welfare of the student community.

As per G.O.Ms.No. 46 HE (CE) Dt: 22.12.2020, all non-professional Degree Programmes shall be 4-year Honours Programme from the academic year 2020 - 21. There will be multiple entry and exit option which includes an exit option after 3years.

The eligible candidates who passed out from Board of Intermediate, AP or other recognized Boards are eligible to participate in web counselling for the seats available in Undergraduate Programmes in Arts, Science, Social Sciences, Commerce, Management, Computer applications and Social Work, etc., leading to the award of B.A., B.Sc., B.Com., BBA., B.Voc, B.F.A, 5 year integrated PG programmes with Intermediate qualification (with the exception of Engineering and Pharmacy streams) etc, in Government Degree Colleges, Government Autonomous Degree Colleges, Private Aided Degree Colleges, Private Unaided Degree Colleges, Private Autonomous Degree Colleges (Aided and Unaided) in the State of Andhra Pradesh for the academic year 2024-25. Candidates are informed that the online admission process comprising of registration, payment of processing fee will commence from 02.07.2024 and pending certificate verification at HLCs will commence from 05.07.2024.

Payment of Processing fee:

Rs.400/- for OC, 300/- for BC and Rs. 200/- for SC/ST through online by credit card/ debit card/ (or) net banking through the "Pay Processing Fee" link in the web site <https://cets.apsche.ap.gov.in/APSCHEHome.aspx>

All the eligible and desirous candidates can pay the processing fee from 02.07.2024 onwards using URL <https://cets.apsche.ap.gov.in/APSCHEHome.aspx>

- Processing fee can be paid through online using credit card or debit card or through internet banking.
- Enter URL <https://cets.apsche.ap.gov.in/APSCHEHome.aspx> and after filling in the required details of the Registration Page, click on “Proceed to Payment”.
- The candidate will be directed to payment gateway.
- Select any one mode of payment i.e credit card or debit card or net banking and enter credentials.
- The transaction charges will be levied as applicable.

Important Note:

Payment of processing fee may sometimes be delayed due to network issues and payment made by the candidate may not be successful. In such cases, candidates need to pay the processing fee once again and the amount debited due to failure of transaction will be remitted back into the respective account within 7 working days from the date of payment. If excess payments are not remitted in 7 working days candidate has to send information like Hall ticket number, Transaction Id, Date of Payment etc to the Email Id: ugonlineadmns@apsche.org and action will be taken immediately for refund. Candidates are requested to note that only one payment will be taken and the amount paid in excess will be refunded automatically.

Registration Process and Verification of Certificates:

- After filling the application form with all relevant details and on successful payment of processing fee, application number will be sent to the registered mobile number and email id, furnished at the time of filling the Registration page.
- Candidates whose certificate data is already verified through web services can proceed for exercising web-options as per schedule.
- For candidates whose certificate data is incomplete/irrelevant, an SMS will be sent to upload the certificates for verification. Such candidates can also attend verification of certificates at HLC from 05.07.2024 after uploading them.
- By entering the Application Number, date of birth and One Time Password the candidate can exercise the options from Home, subject to availability of internet facility/Internet Café/Helpline Center.
- In respect of candidates whose data is found irrelevant/incorrect during verification, an SMS will be sent to the registered Mobile Number to re-upload the certificates. The candidate can also visit the nearest HLC for verification of certificates.
- Such Candidates are informed that the verification of certificates viz SSC memo, Intermediate marks memo, VI class to Intermediate study certificates, Caste Certificate, Income Certificate/Ration Card, Economically Weaker section (EWS) certificate, Physically Challenged Certificate, Residence Certificate will be verified by verification officers.
- **CANDIDATES BELONGING TO SPECIAL CATEGORY LIKE CAP, NCC/EXTRA CURRICULAR ACTIVITIES/SPORTS AND PHYSICALLY CHALLENGED SHALL REPORT TO THE SPECIFIED HELP LINE CENTRE FOR VERIFICATION ON THE SPECIFIED DATES INDICATED IN THE**

SCHEDULE, WHICH WILL BE HELD ONLY ONCE FOR ONLINE ADMISSIONS FOR 2024-25 i.e FROM 08.07.2024 TO 10.07.2024

- Candidates who register for online admissions 2024-25 can only get their certificates verified under Special Category and by clicking „Yes” at the appropriate field. They cannot attend Special Category verification directly without registration.
- Unless the candidate fills in the application details online and exercises web options, he will not be considered for allotment of a seat.
- Candidates are informed that there are 22 Helpline Centers across the state of A.P and the list is provided in Annexure-I.
- **ALL THE CANDIDATES NEED NOT go to help line centers for verification of certificates. In case of candidates whose data is verified, displayed and agreed, they can directly proceed for option entry as per the schedule.**
- For such of the candidates whose data is found incorrect/irrelevant, in the verification process have to report to Help Line Centre and get the data verified and proceed for option entry.
- For any help such as change of Mobile number, Non-Receipt of Login Id, Registration Number or any other corrections, candidates are requested to approach nearest Help Line centers with valid proof.
- Allotments now made are subject to the grant of affiliation from the University.
- Detailed instructions for options entry i.e Instruction Manual for candidates can be accessed through <https://cets.apsche.ap.gov.in/APSCHEHome.aspx>
- The local candidate status under AU and SVU areas will be determined as per the territorial jurisdiction of the Universities before re-organization of districts in A.P

Schedule for Phase-I of Online admissions 2024-25

SI No	Detail	Dates
1	Notification	01.07.2024
2	Registration of students	02.07.2024 to 10.07.2024
3	Special category verification	08.07.2024 to 10.07.2024
4	Opening of HLCs for verification of certificates	05.07.2024
5	Exercise of web options	11.07.2024 to 15.07.2024
6	Allotment	19.07.2024
7	Reporting of students to college allotted and commencement of classes	20.07.2024 to 22.07.2024

VERIFICATION OF CERTIFICATES FOR SPECIAL CATEGORY CANDIDATES:

- a) **PH (Physically Handicapped) i.e Visually Challenged, Hearing Impaired and Orthopedically Handicapped candidates whose certificates are not automatically validated by the Departmental data through online web service need to attend certificate verification.**
- b) **Candidates claiming reservation under Sports & Games, CAP and NCC (National Cadet Cops) have to compulsorily attend certificate verification on any day from 08.07.2024 to 10.07.2024 as their data cannot be validated through web service.**
- c) **Such candidates have to attend certificate verification at any of the three HLCs before exercising options only at SRR & CVR Government Degree College Vijayawada, or Dr. V. S. Krishna Government Degree College, Visakhapatnam or S V University, Tirupati, on any of the dates from 08.07.2024 to 10.07.2024. Reporting time is 9 am.**

Certificates to be produced by candidates at Helpline Centers

All original Certificates and one set of photocopies

- 1) Memorandum of Marks (Inter or its equivalent).
- 2) Proof of Date of Birth (SSC or its Equivalent Memo).
- 3) Transfer Certificate (T.C)
- 4) Study Certificate from VI to Intermediate
- 5) EWS certificate valid for the year 2024-25 from Mee Seva or Grama Sachivalayam for OC candidates who claim reservation under EWS category
- 6) Residence Certificate of candidate for a period of 7 years preceding the qualifying examination (Inter or its equivalent examination) in case where the candidate has no institutionalized education.
- 7) Andhra Pradesh Residence Certificate of father/mother for a period of 10 years excluding the period of employment outside Andhra Pradesh from Tahsildar in respect of Non-Local Candidates.
- 8) Integrated Community Certificate, in case of BC/ST/SC issued by the competent authority.
- 9) Income certificate of parents from all sources issued on or after 01.01.2021 or White Ration card (candidate name and either of the parents name have to be reflected in the ration card) in case of candidates who claim tuition fee reimbursement.
- 10) Local status certificate (if applicable) i.e a candidate who migrates to any part of the state of Andhra Pradesh from the state of Telangana from 02-June-2014 to on/before 01-June- 2022 shall be regarded as the local candidate in the state of Andhra Pradesh.
- 11) Candidates claiming reservation under NCC/Sports/ PH/ CAP shall bring the original certificates.

- a) **PH** - Candidates shall submit certificate issued by the District Medical Board.
- b) **CAP** - Candidates shall submit certificates from the Zilla Sainik Welfare Board (viz) Discharge book & Identity card etc for Verification. Children of Ex-Service and In- Service persons who are domicile of Andhra Pradesh will alone be considered for allotment of seats under CAP Category.
- c) **NCC & Sports** - Produce original certificates issued by competent authorities. The candidate should have represented from the state of AP.
- d) **Extracurricular activities**: Candidates claiming reservation under this category shall produce relevant certificates

Convener Office Address:

CONVENOR, OAMDC-2024-25 ADMISSIONS
A.P. State Council of Higher Education
(A Statutory Body of Government of AP)
III, IV & V Floors, Neeladri Towers,
Sri Ram Nagar, 6th Battalion Road, Atmakur (V)
Mangalagiri (M), Guntur-522503, AP
Email id: ugonlineadmns@apsche.org



CONVENOR
OAMDC-2024-25 ADMISSIONS

Dated: 01.07.2024
Mangalagiri

List of Help Line Centres (HLCs) for the AY 2024-25

S.No	Zone	District	College JB Code	Name of the Govt. Degree College & Place	Name of the Principal	Email Id	Name of the Coordinator	Mobile#
1	I	Srikakulam	12674	GDC (W)(A), Srikakulam	Dr. K.Suryachandra Rao	gdcw.sklmjkc@gmail.com	Dr. V.Sailaja	9949358677
2	I	Parvathipuram Manyam	20209	GDC (SV), Parvathipuram	Dr. C.Chalapathi Rao	svgdcpmm@gmail.com	Dr. M.Narendra	9000522007
3	I	Vizianagaram	32489	GDC, Vizianagaram	Dr. P.Subha	gdcvzmtown@gmail.com	Dr. D.Raghava Swami	9440194626
4	I	Visakhapatnam	12061	GDC (Dr.VSK)(A), Visakhapatnam	Dr. I.Vijaya babu	visakhapatnam.jkc@gmail.com	Dr. Ramesh Dantuluri	7569122173
5	I	Anakapalli	12577	GDC, Chodavaram	Dr. T.Radha Krishna	gdcchodavaram@gmail.com	Dr. P.Kiran Kumar	9000251552
6	II	Kakinada	16323	GDC (PR)(A), Kakinada	Dr. B.V.Tirupanyam	kakinada.jkc@gmail.com	Dr. K.Lakshmana Rao	6301477647
7	II	East Godavari	12784	GDC (A), Rajamahendravaram	Dr. K.Ramachandra Rao	nodaljkcrjy@gmail.com	Dr. D.Suneel Kumar	7093455510
8	II	West Godavari	17568	GDC (A), Tanuku	Dr. P.Anil Kumar	gdctanuku@gmail.com	Dr. D.Vijaya Kumar	9440852728
9	II	West Godavari	12081	GDC, Tadepalligudem	Dr. N.Venkateswara Rao	drggdc.tpg@gmail.com	DR. A.Naga Sudheer Babu	9640308447
10	II	NTR	19687	GDC (SRR&CVR)(A), Vijayawada	Dr. K.Bhagya Lakshmi	vijayawada.jkc@gmail.com	Dr. T.Narayana Rao	8919145492
11	III	Guntur	12818	GDC (W)(A), Guntur	Dr. V.R.Jyotsna Kumari	guntur.jkc@gmail.com	Dr. Shaheda Akther	9885834601
12	III	Prakasam	12093	GDC (W), Ongole	Dr. D.Kalyani	ongole.jkc	Dr. U.Sarala	9490474225
13	III	SPS Nellore	11720	GDC (DK)(W)(A), Nellore	Dr. D.Giri	nellore.jkc@gmail.com	Dr. N.Anitha	8639734668
14	IV	Tirupati	20197	GDC (M), Srikalahasti	Dr. M.Sreelatha	svagovtc@gmail.com	Dr. V. Munaiah	9248525294
15	IV	Chittoor	16654	GDC (PVKN)(A), Chittoor	Dr. P.Jeevana Jyothi	chittoor.jkc@gmail.com	Dr. S.Saravana	7013807419
16	IV	Annamayya	11251	GDC, Pileru	Dr. M.Sudhakar Reddy	sggdcpiler@gmail.com	Dr. S.Saifulla	7989693442
17	IV	YSR	12658	GDC (M)(A), Kadapa	Dr. G.Ravindranath	kadapa.jkc@gmail.com	Dr. T.Manohar Reddy	8919818677
18	IV	Nandyal	16598	GDC (PSC&KVSC), Nandyal	Dr. N.Sasikala	ndlg2.jkc@gmail.com	Dr. Y.Dastagiri	9440220902
19	IV	Anantapuramu	17991	GDC (A), Guntakal	Dr. A.Lakshmaiah	skpgdc.guntakal@gmail.com	Dr. A.Ravishanker Sharma	9398657110
20	IV	Anantapuramu	12532	GDC (M)(A), Anantapuramu	Dr. A.C.R.Divakara Reddy	anantpur.jkc@gmail.com	Dr. B.Ramachandra	8897276509
21	IV	Tirupati	-	S.V University, Tirupati		svuhlc@gmail.com	Dr.D.Vivekananda Reddy	9441005225
22	IV	Kurnool	-	Cluster University, Kurnool		registrarcuklap@gmail.com	Dr.Mohammed Waaiz	9849793821



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Academics



Master of Technology

For graduates who want to become more focused in a particular area, getting a Master of Technology degree is an excellent option. There is also the added benefit of making more money, since you are considered more valuable and in possession of more specialized knowledge.

S.No	Course	Specialization Name / Branch Name	Specialization Code / Branch Code
1	M.Tech	Agricultural Engineering	CC
2	M.Tech	Agricultural Engineering (Farm Machinery & Power Engineering)	C1
3	M.Tech	Mining Engineering	BB
4	M.Tech	Robotics and Artificial Intelligence	AL
5	M.Tech	CSE-Cyber security	AK
6	M.Tech	CSE- Data Science	AJ
7	M.Tech	CSE Artificial Intelligence & Machine Learning	AI
8	M.Tech	Artificial Intelligence & Data Sciences	AH
9	M.Tech	ECE Internet of Things	AG
10	M.Tech	CSE Artificial Intelligence	AF
11	M.Tech	Robotics	AE
12	M.Tech	CSE Internet of Things	AD

S.No	Course	Specialization Name / Branch Name	Specialization Code / Branch Code
13	M.Tech	Artificial Intelligence & Machine Learning	AC
14	M.Tech	Artificial Intelligence	AB
15	M.Tech	Automobile Engineering	AA
16	M.Tech	Power Electronics & Power Systems	99
17	M.Tech	M.S. Sports Technology & Health Science	98
18	M.Tech	Avionics	97
19	M.Tech	Nano Technology	96
20	M.Tech	Control Systems	95
21	M.Tech	Computer Networks	94
22	M.Tech	Mechatronics	93
23	M.Tech	Chemical Engineering	92
24	M.Tech	Infrastructure Engineering & Management	91
25	M.Tech	Bio- Medical Engineering	90
26	M.Tech	Bio- Informatics	89
27	M.Tech	Data Science	88
28	M.Tech	Structural Engineering	87
29	M.Tech	Environmental Engineering	86
30	M.Tech	Structural Design	85
31	M.Tech	Computer Networks & Information Security	84
32	M.Tech	Telematics	83
33	M.Tech	Microwave & Communication Engineering	82
34	M.Tech	Embedded Systems & VLSI Design	81
35	M.Tech	Communications & Signal processing	80

S.No	Course	Specialization Name / Branch Name	Specialization Code / Branch Code
36	M.Tech	MS Occupational Health & Safety Course	79
37	M.Tech	Food Processing Technology	78
38	M.Tech	VLSI Design & Embedded Systems	77
39	M.Tech	VLSI & Micro Electronics	76
40	M.Tech	Digital Signal Processing	75
41	M.Tech	Geo Informatics	74
42	M.Tech	Civil	73
43	M.Tech	VLSI Design	72
44	M.Tech	Tele Communications	71
45	M.Tech	Electronics & Communication Engineering	70
46	M.Tech	Neural Networks	69
47	M.Tech	VLSI & Embedded Systems	68
48	M.Tech	M.S in VLSI Engineering	67
49	M.Tech	Power Systems & Automation	66
50	M.Tech	Electrical Power Systems	65
51	M.Tech	High Voltage and Power Systems Engineering	64
52	M.Tech	Digital Image processing	63
53	M.Tech	High Voltage Engineering	62
54	M.Tech	VLSI System Design	61
55	M.Tech	Electrical Power Engineering	60
56	M.Tech	Computer Science & Technology	59
57	M.Tech	Computer Science Engineering	58
58	M.Tech	VLSI	57
59	M.Tech	Power systems	56
60	M.Tech	Embedded Systems	55
61	M.Tech	Power Electronics & Electric Drives	54

S.No	Course	Specialization Name / Branch Name	Specialization Code / Branch Code
62	M.Tech	Power system control & Automation	53
63	M.Tech	Power Electronics & Drives	52
64	M.Tech	Chemical	51
65	M.Tech	Advanced Power Systems	50
66	M.Tech	Computers and Communication Engineering	49
67	M.Tech	Embedded Systems & VLSI	48
68	M.Tech	Communication Systems	47
69	M.Tech	Communication Engineering & Signal Processing	46
70	M.Tech	Systems and Signal Processing	45
71	M.Tech	Electrical Machine & Drives	44
72	M.Tech	Power Electronics	43
73	M.Tech	Power & Industrial Drives	42
74	M.Tech	Aerospace Engineering	41
75	M.Tech	Information Technology	40
76	M.Tech	Computers and Communications	39
77	M.Tech	Digital Electronics & Communication Systems	38
78	M.Tech	Digital Electronics & Communication Engineering	37
79	M.Tech	Signal Processing & Communications	36
80	M.Tech	Computer Aided Structural Analysis and Design	35
81	M.Tech	Product Design & Manufacturing	34
82	M.Tech	Remote Sensing	33
83	M.Tech	Spatial Information Technology	32
84	M.Tech	Power System & Control	31

S.No	Course	Specialization Name / Branch Name	Specialization Code / Branch Code
85	M.Tech	Power System Engineering	30
86	M.Tech	PS with Emphasis on HV Engineering	29
87	M.Tech	Control Engineering	28
88	M.Tech	Instrumentation and Control Systems	27
89	M.Tech	Cyber Security	26
90	M.Tech	Software Engineering	25
91	M.Tech	Material Science & Technology	24
92	M.Tech	Highway Engineering	23
93	M.Tech	Transportation Engineering	22
94	M.Tech	Thermal Engineering	21
95	M.Tech	Geo Technical Engineering	20
96	M.Tech	Soil Mechanics & Foundation Engineering	19
97	M.Tech	Thermal Sciences and Energy Systems	18
98	M.Tech	Advanced Manufacturing Systems	17
99	M.Tech	Computer Aided Analysis and Design	16
100	M.Tech	Machine Design	15
101	M.Tech	Mechanical Engineering Design	14
102	M.Tech	Advanced Manufacturing and Mechanical Systems Design	13
103	M.Tech	Power Electronics & Systems	12
104	M.Tech	Computer & Communications	11
105	M.Tech	Image Processing (IP)	10
106	M.Tech	Computer Aided Design and Manufacturing	09
107	M.Tech	Petroleum Engineering	08

S.No	Course	Specialization Name / Branch Name	Specialization Code / Branch Code
108	M.Tech	Pipe Line Engineering	07
109	M.Tech	Digital System & Computer Electronics	06
110	M.Tech	Computer Science	05
111	M.Tech	CAD/CAM	04
112	M.Tech	Bio-Technology	03
113	M.Tech	Renewable Energy	02
114	M.Tech	Environmental Engineering & Management	01

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