

# SIR C R REDDY COLLEGE FOR WOMEN

(Affiliated to AdikaviNannaya University,



## PG ENTRANCE COACHING For M.Sc., (CHEMISTRY)

**Date: 27-June-2022 to 21 -July-2022**

**Time: 8:30 am to 9:30 am**

**&**

**4.30pm to 5.30pm**

**Organized by**

**CAREER GUIDANCE & PLACEMENT CELL**

**2021-2022**

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## About Programme

The Career Guidance and Placement Cell at Sir CR Reddy College for Women organized PG entrance coaching classes for AP PG CET 2019 in Commerce, Mathematics, Physics, Chemistry, and Life Sciences. These classes were conducted by senior faculty members who specialize in the respective subjects at the college.

### **Program: PG Entrance Coaching for M.Sc. Chemistry**

#### **Subjects Covered:**

- Chemistry

#### **Target Audience:**

- III B.SC(MPC,MCCS,CBZ) students aspiring for postgraduate studies

#### **Duration:[**

- June 27<sup>th</sup> , 2022, to July 21<sup>st</sup> , 2022 (25 days)

#### **Time:**

- 8:30 AM to 9:30 AM & 4.30PM to 5.30PM

#### **Organized By:**

- Career Guidance and Placement Cell at Sir CR Reddy College for Women

#### **Resource person:**

- Coaching by Mrs .P.Ramya krishna senior lecturer in chemistry

#### **Program Overview:**

- Specifically designed coaching program focusing on AP PG CET 2019 for M.Sc. aspirants.
- Conducted by seasoned faculty members from Sir CR Reddy College, each specializing in MSC Chemistry.
- Comprehensive curriculum comprising subject-specific lectures, problem-solving sessions, practice tests, and exam strategy workshops.
- Tailored content to acquaint students with the AP PG CET exam pattern, syllabi, and effective preparation methodologies.

#### **Benefits for B.Sc. Students:**

- Early guidance and preparation assistance for M.Sc. entrance exams.
- Exposure to exam patterns, aiding in better preparedness.
- Access to experienced faculty for subject-specific guidance and doubt resolution.
- Enhanced readiness for M.Sc. studies by initiating preparation in advance.

This coaching program aims to support B.Sc. students in their aspirations for pursuing postgraduate studies by providing structured coaching specifically aligned with the requirements of the AP PG CET 2019 examination.

## Learning Objectives and Learning Outcomes

### Learning Objectives:

1. Subject Mastery: To facilitate a comprehensive understanding of the core concepts and subject-specific knowledge required for M.Sc.Chemistry entrance exams.
2. Exam Familiarity: To familiarize students with the exam pattern, question types, and syllabi specific to AP PG CET 2019.
3. Problem-Solving Skills: To enhance problem-solving abilities and critical thinking necessary to tackle complex questions in the entrance exams.
4. Time Management: To equip students with effective time management strategies for the exam and optimize their performance within the stipulated time frame.
5. Exam Strategy: To provide guidance on effective exam strategies, including question selection, prioritization, and efficient answering techniques.

### Expected Outcomes:

1. Strong Foundation: Students are expected to build a strong foundational understanding of their respective subjects, providing a basis for advanced studies.
2. Improved Performance: Enhanced problem-solving skills and a better grasp of exam patterns can result in improved performance in mock tests and the actual entrance exam.
3. Confidence: Through regular practice and guidance, students are likely to gain confidence in handling diverse questions and scenarios during the examination.
4. Effective Preparation: Students should be better prepared to face the challenges of the entrance exams by utilizing learned strategies and subject-specific knowledge.
5. Readiness for Postgraduate Studies: The coaching program aims to prepare students adequately for the rigors of postgraduate studies in their chosen fields.

# Permission Letter

## Permission Letter

20-06-2022  
Eluru

To  
The Principal  
Sir C.R.Reddy College for Women  
Eluru

**Subject: Request to grant permission to conduct P.G Entrance test Coaching Classes to final year students.**

This is to bring to your kind notice that, Career Guidance and Placement Cell is planning to conduct P.G Entrance test Coaching Classes for interested III B.Sc/B.Com students specializing life Sciences, Mathematics, Physics, Chemistry, Commerce .

The coaching classes aim is to provide additional support and guidance to our ambitious students who aspire to excel in their respective fields and we believe that providing coaching classes with in our college will not only benefit our students but also contribute to the overall academic excellence of our institution. These classes will be conducted for about 30 days i.e., from 27<sup>th</sup> June 2022 to 21<sup>st</sup> July 2022. The duration of these classes will be from 8:30 am to 9:30 am and 4:30 pm to 5:30 pm. I kindly request your approval for this initiative, as it aligns with our commitment to fostering academic excellence and preparing our students for successful futures.

Thanking you Madam,

*Permitted*  
*Sahid*  
Principal  
Sir C.R.Reddy College for Women  
ELURU

Yours Faithfully,

*[Signature]*  
(Coordinator)

Career Guidance and Placement Cell

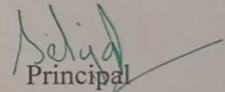
# Notice to Students

## NOTICE

22-06-2022

This is to inform you all that Career Guidance and placement Cell arranged P.G Entrance Test Coaching Classes for interested III B.Sc/B.Com students specializing life Sciences, Mathematics, Physics, Chemistry, Commerce. These Classes will be held within the college at Seminar Hall from 27<sup>th</sup> June 2022 to 21<sup>st</sup> July 2022 running from 8:30 am to 9:30 am and 4:30 pm to 5:30 pm. This initiative aims to enhance your preparation for P G Entrance Test offering personalized guidance to help you excel in the examination. These sessions will provide valuable insights and guidance.

We encourage all interested candidates to attend and take advantage of this valuable opportunity.

  
Principal

Principal  
Sir C.R.Reddy College for Women  
ELURU

## Course Structure

### Chemical Sciences

#### Inorganic Chemistry:

s-block elements, p-block elements, Chemistry of d block elements, f block elements, Organometallic Chemistry, Organometallic Chemistry, Spectral and Magnetic Properties of Metal Complexes, Stability of metal complexes

#### Organic Chemistry

Hydroxyl Compounds, Carboxylic acids and derivatives, Exercises in interconversion, heterocyclic compounds, Amino Acids and proteins.

#### Physical Chemistry

Liquid State, Gaseous State, Physical State, Electrochemistry, chemical kinetics.

#### General Chemistry

Theory of quantities analysis, Chemical Bonding, Molecular symmetry, Evaluation of analytical data

General principles of inorganic quantitative analysis.

# Course Material

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The number of possible geometrical isomers for  $[\text{Pt}(\text{NO}_2)(\text{C}_2\text{H}_5\text{N})(\text{NH}_2\text{OH})]^+$  is

1. 2      2. 4      3. 3      4. 6

The order of stability of complexes  $\text{Fe}^{3+}$ ,  $\text{CO}^{3+}$ ,  $\text{Ni}^{2+}$ ,  $\text{Cu}^{2+}$  for the given ligand is:

1.  $\text{Fe}^{3+} > \text{CO}^{3+} > \text{Ni}^{2+} > \text{Cu}^{2+}$   
 2.  $\text{Fe}^{3+} > \text{Ni}^{2+} > \text{CO}^{3+} > \text{Cu}^{2+}$   
 3.  $\text{Cu}^{2+} > \text{Ni}^{2+} > \text{CO}^{3+} > \text{Fe}^{3+}$   
 4.  $\text{Cu}^{2+} > \text{CO}^{3+} > \text{Fe}^{3+} > \text{Ni}^{2+}$

Which of the following complexes do not obey Effective atomic number rule?

- i.  $[\text{Cr}(\text{NH}_3)_6]^{3+}$       ii.  $[\text{Ni}(\text{NH}_3)_6]^{2+}$   
 iii.  $[\text{CO}(\text{NH}_3)_6]^{2+}$       iv.  $[\text{Pt}(\text{NH}_3)_6]^{4+}$   
 1. ii, iv only      2. i, ii, iii only  
 3. iv only      4. i, ii only

The d orbital involved in hybridization of orbitals of Fe during the formation of  $\text{Fe}(\text{CO})_5$  is

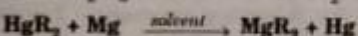
1.  $3d_{z^2}$       2.  $3d_{x^2-y^2}$       3.  $4d_{z^2}$       4.  $4d_{x^2-y^2}$

The pair in which both the molecules have same magnetic moment:

1.  $[\text{Cr}(\text{H}_2\text{O})_6]^{3+}$ ,  $[\text{CoCl}_4]^{2-}$   
 2.  $[\text{Cr}(\text{H}_2\text{O})_6]^{3+}$ ,  $[\text{Fe}(\text{H}_2\text{O})_6]^{2+}$   
 3.  $[\text{Mn}(\text{H}_2\text{O})_6]^{2+}$ ,  $[\text{Fe}(\text{H}_2\text{O})_6]^{2+}$   
 4.  $[\text{COCl}_4]^{2-}$ ,  $[\text{Mn}(\text{H}_2\text{O})_6]^{2+}$

Which one of the following is not coloured?

1.  $[\text{Ti}(\text{H}_2\text{O})_6]^{3+}$       2.  $[\text{CO}(\text{H}_2\text{O})_6]^{2+}$   
 3.  $[\text{Cu}(\text{H}_2\text{O})_6]^{2+}$       4.  $[\text{Sc}(\text{H}_2\text{O})_6]^{3+}$



The solvent used in the above reaction is:

1. Ethanol      2. Methanol  
 3. Benzene      4. Ether

The number of bridging carbonyls present in  $\text{Fe}_3(\text{CO})_{12}$  is

1. 1      2. 2      3. 3      4. 4

Which one of the following is nido-carborane?

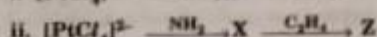
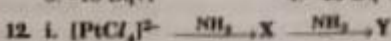
1.  $\text{C}_2\text{B}_{10}\text{H}_{12}$       2.  $\text{C}_2\text{B}_4\text{H}_8$   
 3.  $\text{C}_2\text{B}_7\text{H}_{13}$       4.  $\text{C}_2\text{B}_{10}\text{H}_{10}$

Which one of the following is correct?

1.  $\text{VO}_2^{2+}$  is hard acid      2.  $\text{SC}^{3+}$  is soft acid  
 3. CO is hard base      4. ROH is soft base

11. The crystal field stabilisation energy for high-spin  $d^4$  octahedral complex is:

1.  $-6 Dq$       2.  $-12 Dq$   
 3.  $-18 Dq + P$       4.  $-16 Dq + P$



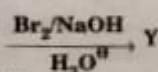
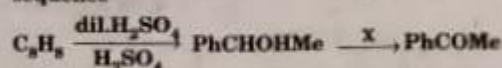
In the above reactions Y and Z respectively are:

1.  $\text{trans}[\text{PtCl}_2(\text{NH}_3)_2]$ ,  $\text{trans}[\text{PtCl}_2(\text{NH}_3)(\text{C}_2\text{H}_4)]$   
 2.  $\text{trans}[\text{PtCl}_2(\text{NH}_3)_2]$ ,  $\text{cis}[\text{PtCl}_2(\text{NH}_3)(\text{C}_2\text{H}_4)]$   
 3.  $\text{cis}[\text{PtCl}_2(\text{NH}_3)_2]$ ,  $\text{trans}[\text{PtCl}_2(\text{NH}_3)(\text{C}_2\text{H}_4)]$   
 4.  $\text{cis}[\text{PtCl}_2(\text{NH}_3)_2]$ ,  $\text{cis}[\text{PtCl}_2(\text{NH}_3)(\text{C}_2\text{H}_4)]$

13. 'X' is an essential trace element. Its use in industry (particularly electroplating) causes severe water pollution. What is 'X'?

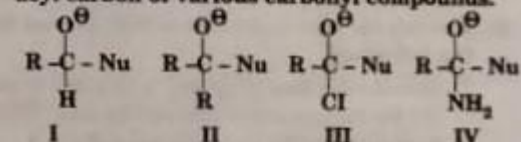
1. Fe      2. Cu      3. Co      4. Ni

14. Identify X and Y in the following reaction sequence



- |                                    |                        |
|------------------------------------|------------------------|
| X                                  | Y                      |
| 1. mCPBA                           | PhCOCH <sub>2</sub> Br |
| X                                  | Y                      |
| 2. H <sub>2</sub> CrO <sub>4</sub> | PhCOOH                 |
| X                                  | Y                      |
| 3. H <sub>2</sub> CrO <sub>4</sub> | PhCOOB                 |
| X                                  | Y                      |
| 4. KMnO <sub>4</sub>               | PhBr                   |

15. Observe the following tetrahedral intermediates that are formed when nucleophile attacks acyl carbon of various carbonyl compounds.



Which of these intermediates will lead to a substitution product?

1. III, IV      2. I, III      3. II, IV      4. II, III, IV

16. The product of a nitro compound A ( $C_8H_9NO_2$ ) and nitrous acid, does not dissolve in sodium hydroxide. Nitro compound A gave B when reacted with NaOH followed by  $H_2SO_4$ . Isomer of A when reacted with  $HCHO \cdot NH_4Cl$  gave C. What are B and C?

- |               |                            |
|---------------|----------------------------|
| 1. B          | C                          |
| $CH_3COCH_3$  | $CH_3CH_2CH(NO_2)CH_2NH_2$ |
| 2. B          | C                          |
| $CH_3CH_2CHO$ | $(CH_3)_2C(NO_2)CH_2NH_2$  |
| 3. B          | C                          |
| $CH_3COCH_3$  | $(CH_3)_2C(NO_2)CH_2NH_2$  |
| 4. B          | C                          |
| $CH_3COCH_3$  | $CH_3CH_2CH=CH_2$          |

17. An organic compound X dissolves in dil. HCl but does not give IR absorption band in the range of  $3500-3400\text{ cm}^{-1}$ , whereas compound Y does not dissolve in dil. HCl but displayed IR absorption band at  $3500-3400\text{ cm}^{-1}$ . Identify X and Y.

- |      |   |
|------|---|
| 1. X | Y |
|      |   |
| 2. X | Y |
|      |   |
| 3. X | Y |
|      |   |
| 4. X | Y |
|      |   |

18. Solution of  $ZnCl_2$  and conc. HCl turned cloudy on heating with an alcohol (A). A on reaction with  $PBr_3$  and then with the reagent B is converted to C (major), which on reduction gave D. What are A, B and D?

- |                  |        |                      |
|------------------|--------|----------------------|
| 1. A             | B      | D                    |
| $CH_3CH_2CH_2OH$ | $NaCN$ | $CH_3CH_2CH_2NHCH_3$ |
| 2. A             | B      | D                    |
| $CH_3CH_2CH_2OH$ | $AgCN$ | $CH_3CH_2CH_2NHCH_3$ |
| 3. A             | B      | D                    |
| $CH_3CHOHCH_3$   | $AgCN$ | $(CH_3)_2CHNHCH_3$   |
| 4. A             | B      | D                    |
| $(CH_3)_2COH$    | $NaCN$ | $(CH_3)_2CCH_2NH_2$  |

19. Identify the statement that is NOT correct from the following

1. Benzene free from thiophene is obtained by shaking the mixture containing both by conc.  $HNO_3$
2. Pyrrole resembles aniline in reactivity
3. Furan is less aromatic than pyrrole.
4. Pyridine resembles nitrobenzene in reactivity towards electrophilic substitution

20. Which of the following represents the structure of D-Mannopyranose?

- 1.
- 2.
- 3.
- 4.

21. The amino acid containing guanidine group is

1. Lysine
2. Valine
3. Proline
4. Arginine

22. Which of the following molecular orbital represents excited state HOMO of 1,3-butadiene?

- 1.
- 2.
- 3.
- 4.

23. The major product from the following reaction is

Meso-2,3-dibromobutane  $\xrightarrow{I^+}$  ?

- 1.
- 2.
- 3.
- 4.

24. Which of the following represents functional group interconversion (FGI)?

- I.
- II.
- III.
- IV.

1. II, III
2. I, III
3. I, IV
4. II, IV

25. Which of the following will give doublet and a quartet in  $^1\text{H-NMR}$  spectroscopy?

1. Ethyl chloride
2. Acetic acid
3. Ethane
4. Acetaldehyde

26. The number of carbon atoms present in a compound, whose mass spectrum showed  $M^+$  at  $m/z$  86 (% RA 50) and  $M+1$  at 87 (%RA 2.8)

1. 3
2. 5
3. 2
4. 4

27. Match the following

List- I

List - II

- |                              |           |
|------------------------------|-----------|
| A. $\text{PhCOCH}_3$         | I. 1725   |
| B. $\text{PhCH}_2\text{OH}$  | II. 1760  |
| C. $\text{PhCH}_2\text{CHO}$ | III. 3330 |
|                              | IV. 1685  |

Correct answer is

- |       |     |    |
|-------|-----|----|
| A     | B   | C  |
| 1. IV | III | I  |
| A     | B   | C  |
| 2. IV | III | II |
| A     | B   | C  |
| 3. I  | IV  | II |
| A     | B   | C  |
| 4. I  | II  | IV |

28. In a conductance cell, the dimensions of the electrodes are 1 cm and 1.5 cm and the two electrodes are separated by 0.5 cm, then the cell constant value in  $\text{cm}^{-1}$  is.

1. 7.5
2. 0.4
3. 1.0
4. 0.33

29. The molar conductances of sodium acetate, hydrochloric acid and sodium chloride at infinite dilution are  $91.0 \times 10^{-4}$ ,  $426.16 \times 10^{-4}$  and  $126.45 \text{ s.m}^2 \cdot \text{mol}^{-1}$ , respectively at  $25^\circ\text{C}$ . The molar conductance at infinite dilution for acetic acid is

1. 461.61
2. 390.71
3. 643.61
4. 210.70

30. All electro chemical cell in construct by combining Ag and Cd electrodes. The standard reduction potentials of Ag and Cd at  $25^\circ\text{C}$  are +0.80 and -0.40 V respectively. Which of the following statement is correct?

1. In electrochemical cell reaction Ag becomes  $\text{Ag}^+$  and  $\text{Cd}^{2+}$  becomes Cd
2. Both Ag and Cd electrodes undergo oxidation reaction
3. In electro chemical cell reacting  $\text{Ag}^+$  reduces to Ag and Cd oxidises to  $\text{Cd}^{2+}$
4. Both Ag and Cd electrodes undergo reduction reaction.

31. The rate constant value for the decomposition of gaseous  $\text{N}_2\text{O}_5 \rightleftharpoons 2\text{NO}_2 + \frac{1}{2}\text{O}_2$  is  $5 \times 10^{-4} \text{ S}^{-1}$ .

Calculate the time required for the  $\text{N}_2\text{O}_5$  concentration to be reduced to 10% of the original value.

1.  $4.6 \times 10^3$
2.  $4.6 \times 10^2$
3.  $5.93 \times 10^3$
4.  $5.93 \times 10^2$

32. Persulphate - Iodide reaction follows second order kinetics. The units for the rate of the above reaction is

1.  $\text{dm}^3 \cdot \text{mol}^{-1} \cdot \text{S}^{-1}$
2.  $\text{mol} \cdot \text{dm}^{-2} \cdot \text{S}^{-1}$
3.  $\text{dm}^6 \cdot \text{mol}^{-2} \cdot \text{S}^{-1}$
4.  $\text{S}^{-1}$

33. -3, 100  $\text{J} \cdot \text{mol}^{-1}$  work is done during the conversion of one mole of water at  $100^\circ\text{C}$  to steam at 1 atm. pressure. Heat of vapourisation of water at  $100^\circ\text{C}$  is  $40,670 \text{ J} \cdot \text{mol}^{-1}$ . Change in internal energy during the process in  $\text{J} \cdot \text{mol}^{-1}$  is

1. 0
2. 43,770
3. -13.1
4. 37,570

34. Joule - Thomas coefficient,  $\mu_{J-T}$  is defined as

1.  $\left(\frac{\partial E}{\partial T}\right)_V$
2.  $\left(\frac{\partial T}{\partial P}\right)_H$
3.  $\left(\frac{\partial H}{\partial P}\right)_T$
4.  $\left(\frac{\partial P}{\partial T}\right)_V$

35. The efficiency of an engine operating between  $110^\circ\text{C}$  and  $25^\circ\text{C}$  is

1. 17.7%
2. 28.5%
3. 22.2%
4. 77.8%

36. The molar extinction coefficient of phenanthroline complex of iron (II) is  $12,000 \text{ dm}^3 \cdot \text{mol}^{-1} \cdot \text{cm}^{-1}$ , and the minimum detectable absorbance is 0.01. The minimum concentration of the complex in molarity that can be detected in a Lambert - Beer law cell of path length 1.00 cm is

1.  $8.33 \times 10^{-7}$
2. 120
3.  $12 \times 10^5$
4. 0.01

37. The quantum yield of the following reaction is  $2\text{HI} \xrightarrow{h\nu} \text{H}_2 + \text{I}_2$

1. < 1
2.  $1 \times 10^6$
3.  $1 \times 10^2$
4. 2

38. The selection rules for spectral transitions in atomic spectra are (i)  $\Delta n = 1, 2, 3, 4, \dots$  And (ii)  $\Delta l = \pm 1$ . Using these selection rules, determine which of the following transitions are allowed

- I.  $1s \rightarrow 2p$
- II.  $2s \rightarrow 3s$
- III.  $2p \rightarrow 3s$
- IV.  $4p \rightarrow 5f$

1. I & II
2. I & III
3. II & IV
4. II & III

39. Which of the following spectra are shown by molecules when vibrational motion is accompanied by a change in the dipole moment of the molecule?

1. Microwave
2. Raman
3. I.R.
4. uv-visible

40. The organic compound with molecular formula  $\text{C}_3\text{H}_6$  shows only one NMR signal is

1. cyclo propane
2. 1-propene
3. n-propane
4. cyclopropene

41. With respect to all alkali metals, which of the following is not correct?

1. react readily with water and liberate  $\text{H}_2$
2. react with nitrogen and form nitrides
3. dissolve in mercury
4. soluble in anhydrous liquid ammonia

42. In which of the following reactions of  $N_2H_4$ ,  $N_2$  is not evolved ?

1.  $N_2H_4 + Na \rightarrow$
2.  $N_2H_4 + PtCl_4 \rightarrow$
3.  $N_2H_4 + O_2 \rightarrow$
4.  $N_2H_4 + IO_3^- \rightarrow$

43. Zircon belongs to which type of silicates ?

1. Chain silicates
2. Ortho silicates
3. Pyrosilicates
4. Cyclic silicates

44. Which of the following metals react with dilute sulphuric acid and give  $H_2$  gas ?

- i. Cu      ii. Fe      iii. Zn
1. i, ii
  2. ii, iii
  3. i, iii
  4. i, ii, iii

45. The number of amphoteric oxides in the following:  $CO_2$ ,  $SnO_2$ ,  $NO_2$ ,  $ZnO$ ,  $SnO$ ,  $NO$ ,  $CO$ ,  $V_2O_5$ ,  $Al_2O_3$ ,  $CrO_3$

1. 5
2. 6
3. 3
4. 4

46. Which of the following are the properties of interhalogen compounds ?

- i. Polar molecules      ii. Reducing agents  
iii. Low thermal stability

1. i, ii only
2. i, ii, iii only
3. i, iii only
4. ii, iii only

47. Which of the following are the common hydrolysis products of  $XeF_4$  and  $XeF_6$  ?

- i. Xe      ii. HF      iii.  $O_2$       iv.  $XeO_3$
1. i, ii, iii
  2. ii, iv
  3. ii, iii, iv
  4. i, ii, iv

48. The order of stability of +2 oxidation state of Cr, Mn, Fe and Co is:

1.  $Mn > Fe > Cr > Co$
2.  $Cr > Mn > Co > Fe$
3.  $Co > Mn > Fe > Cr$
4.  $Fe > Mn > Co > Cr$

49. Which of the following statements is correct?

1. Titanium group metals form stable interstitial metal hydrides.
2. Cr(III) compounds are strong oxidizing agents
3. Mo, W differ in their properties
4. Ti(IV), is less acidic than Ti(III)

50. Which pair of ions has same number of electrons ?

1.  $La^{3+}$ ,  $Ce^{3+}$
2.  $Eu^{3+}$ ,  $Gd^{3+}$
3.  $Dy^{3+}$ ,  $Sm^{3+}$
4.  $Lu^{3+}$ ,  $Yb^{3+}$

51. Which of the following reactions does not occur in liquid ammonia ?

1.  $KCl + AgNO_3 \rightarrow AgCl + KNO_3$
2.  $Zn(NH_2)_2 + 2NaNH_2 \rightarrow Na_2Zn(NH_2)_2 + 2NH_3$
3.  $CuI + Na \rightarrow Cu + NaI$
4.  $BF_3 + NH_3 \rightarrow BF_3 \cdot NH_3$

52. The correct statement regarding Fajan's rules is:

1. The cations with smaller size have lower polarizing power
2. For effective polarization, there should be high charge on the cation or the anion or both
3. Cations with pseudo inert gas configuration have less polarizing power.
4. The anions with large size have less polarizability.

53. Which of the following is paramagnetic in nature?

1. CO
2.  $CN^-$
3. NO
4.  $NO^+$

54. The indicator which can be used to detect equivalence point in the titration of  $NH_4OH$  with HCl is:

1. Methyl red
2. Cresol red
3. Phenol red
4. Phenolphthalein

55. Which of the following is not correct?

1. Copper is better conductor than bismuth.
2. Osmium is so soft that it can be cut with a knife.
3. Sodium metal is a good conductor of electricity.
4. Tungsten melts at high temperatures.

56. According to significant figure convention, the result obtained by adding 12.13, 19.0 and 2.01 is:

1. 33.144
2. 33.14
3. 33
4. 33.1

57. The molecule having  $S_4$  axis is:

1.  $SiCl_4$
2.  $BeCl_2$
3.  $CCl_4$
4.  $XeF_4$

58. Which of the following is insoluble in dilute nitric acid ?

1.  $HgS$
2.  $PbS$
3.  $Bi_2S_3$
4.  $CuS$

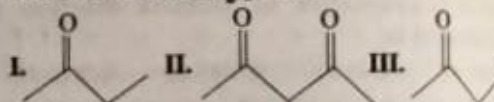
59. The colour of  $HgNH_2Cl$  is:

1. Red
2. Yellow
3. Black
4. White

60. Number of bonding electron pairs and number of lone pairs of electrons in  $ClF_3$ ,  $SF_6$ ,  $BrF_3$  respectively are:

1. 3,1; 4,2; 5,1
2. 3,1; 4,1; 5,2
3. 3,2; 4,1; 5,1
4. 3,2; 4,2; 5,2

61. Arrange the following in the correct acidic order of the  $\alpha$ - $CH_2$  protons.



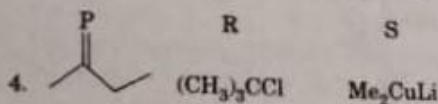
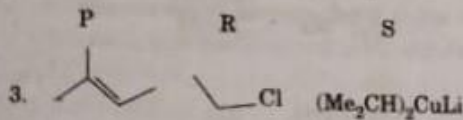
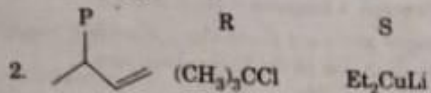
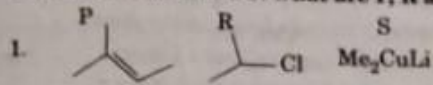
1. I > III > II
2. III > II > I
3. I < II < III
4. I < III < II

62. Heat of hydrogenations of three alkenes X, Y, Z respectively are -28.5, -30.3 and -26.9 KJ/mol. What are X, Y, Z ?

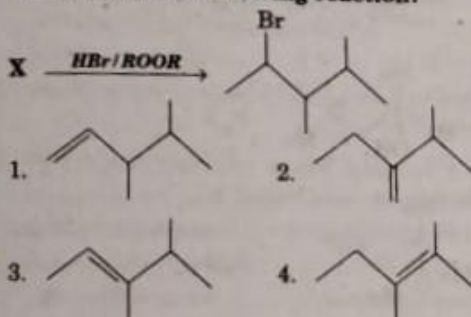
- I. 2-Methyl -2-butene
- II. 2-Methyl -1-butene
- III. 3-Methyl -1-butene

- |    |    |     |     |
|----|----|-----|-----|
|    | X  | Y   | Z   |
| 1. | II | III | I   |
|    | X  | Y   | Z   |
| 2. | II | I   | III |
|    | X  | Y   | Z   |
| 3. | I  | II  | III |
|    | X  | Y   | Z   |
| 4. | I  | III | II  |

63. An alkene P ( $C_5H_{10}$ ) on HBr addition followed by reaction with  $Zn^{II}$  gives Q, which can also be prepared from R and S. What are P, R and S?



64. What is X in the following reaction?



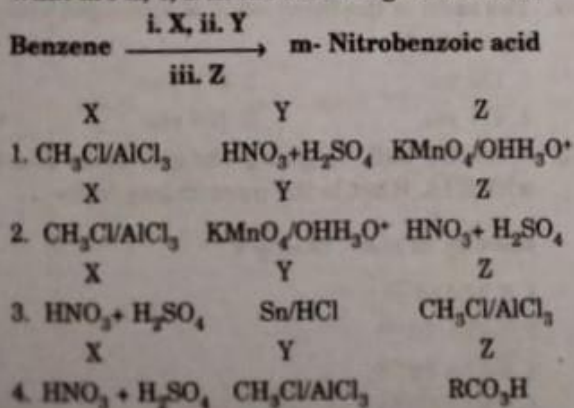
65. An alkene X ( $C_8H_{16}$ ) on bromination followed by reaction with alc-KOH and then  $NaNH_2$  gave Y. Y on hydration yielded Z. What is Z?

1.  $PhCHOHCH_3$
2.  $PhCH_2CHO$
3.  $PhCOCH_3$
4.  $PhCH_2CH_2OH$

66. Which of the following statements is NOT correct with respect to cyclohexane conformations?

1. Twist boat conformation is free from angle strain.
2. Chair conformation is free from torsional strain.
3. Boat form possess Pitzer strain.
4. Boat conformation is free from van der Waals strain.

67. What are X, Y, Z in the following conversion?

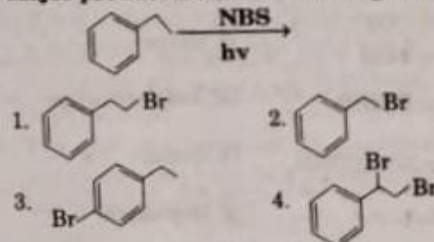


68. Identify the correct matched pair from the following

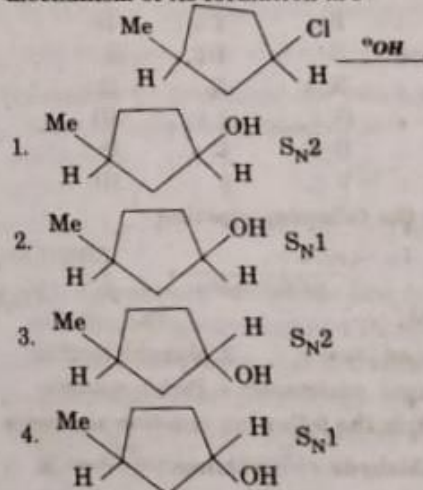
Substituent on benzene	Influence on benzene
I. -OMe	+M & -I
II. -NO <sub>2</sub>	+M
III. -NHCOCH <sub>3</sub>	-M
IV. -CHO	-M

1. II, III    2. I, III    3. II, IV    4. I, IV

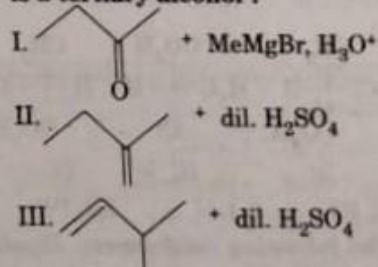
69. Major product from the following reaction is



70. The product from the following reaction and mechanism of its formation are



71. 2-Methyl-2-butene on reaction with  $B_2H_6/H_2O_2, ^-OH$  gave an alcohol X. Which of the following reactions give isomer of X which is a tertiary alcohol?



1. I, II    2. II, III    3. I, III    4. I, II, III

72. Which of the following conversions represent Kolbe reaction?

1. Phenol  $\rightarrow$  Salicylaldehyde.
2. Phenol  $\rightarrow$  Anisole
3. Phenol  $\rightarrow$  Salicylic acid
4. Phenol  $\rightarrow$  Picric acid

# Students List

**SIR C.R.REDDY COLLEGE FOR WOMEN, ELURU**

**PG ENTRANCE COACHING**

**2021-2022**

**SUB: CHEMISTRY**

**ATTENDANCE SHEET**

S.NO	ROLL. NO	NAME OF THE STUDENT	CLASS	SIGNATURE OF THE STUDENT
1	191120	V.SOWMYA	MPC	V. Sowmya
2	191082	CH.NEERAJA	MPC	ch. Neeraja
3	191051	M.ANUSHA	MPC	M. Anusha
4	201001	CH.SATHIVKA	CBZ	ch. sathivka
5	201002	G.N.JYOTHI	CBZ	G.N. Jyothi
6	201003	K.ANVITHA	CBZ	K. Anvitha
7	184026	K.THANUSHA	CBZ	K. Thanusha
8	191001	B. JANAKI	MPC	B. Janaki
9	191014	K.B LAVANYA	MPC	K. B. Lavanya
10	191021	B. MANJULA	MPC	B. Manjula

B. Anu  
SIGNATURE



# REPORT

## **PROGRAMME:** PG Entrance COACHING FOR III B.Sc. Aspirants in Chemistry subject.

In association with IQAC & In accordance with the resolution made during the meeting and documented in the minutes, it was unanimously agreed to arrange PG entrance coaching classes for interested students pursuing III B.Sc (CBZ, MPC). This significant decision forms an integral part of the report on the PG entrance coaching classes in **Chemistry** subject conducted from 27-june-2022 to 21 -july-2022 from 9:30 to 12:30 and 4.30 to 5.30. These classes were conducted senior and expert faculty from the concerned department.

Approximately motivated students actively participated in the coaching sessions. These meticulously organized classes aimed to prepare the students comprehensively for the upcoming PG entrance examinations scheduled in the month of May 2019. The coaching sessions were diligently conducted from 9:30 AM to 12:30 PM, adhering to a structured curriculum meticulously designed to equip students with the essential skills and knowledge required for success in the examination.


The outcomes of these coaching classes have been highly encouraging. Close to 10 students showcased exceptional performance, securing remarkable pg. ranks demonstrating both their commitment and the effectiveness of the coaching program. Furthermore, all participating students successfully qualified for the examination, marking a significant achievement resulting from our collaborative endeavor.

The successful arrangement of these coaching classes aligns directly with the decision made during the meeting. These sessions facilitated a conducive learning environment, significantly contributing to the preparedness and success of the students preparing for the PG entrance examination.

All students were qualified in the Entrance exam and got Good ranks.

Their dedication has been instrumental in empowering our students for academic success.

# RANK CARDS

 **APPGCET - 2022**  
Post-Graduation Admissions  
(Conducting by Yogi Vemana University, Kadapa and APSCHE)

Hall Ticket No.	31020227390	Rank	5675
Candidate Name	VEERAVALLI SOWMYA	Father Name	VEERAVALLI RAJESH LATE
Gender	F	Caste	BC - A
Alloted Institute	CRRW	Alloted Branch	PG127

Based on your acceptance to join CRRW PG127 through self reporting system on date: 14.12.2022  
your joining details are confirmed vide Hall ticket No. 31020227390.  
Note: Submit this along with provisional allotment order already downloaded.

CONVEYOR  
APPGCET-2022 ADMISSIONS

Print

# PHOTO GALLERY



**PG CET ENTRANCE COACHING IN**

**CHEMISTRY YEAR: 2021-**

**2022**