

(+2 Model Test Paper)
(Semester '2' Chemistry)

Time Allowed: 3 hours

Maximum Marks: 70.

- Note :-**
- (i) Question No. 1 to 10 will be from whole syllabus and will be of 1 mark each.
 - (ii) Question No. 11 to 20 will be of 2 marks each.
 - (iii) Question No. 21 to 30 will be 3 marks each.
 - (iv) Question No. 31 to 32 will be 5 marks each with internal choice.
 - (v) You must write code No. at the Top of the title page of you Answer-book.
 - (vi) Make sure that the Answer-book contains 30 pages (including title page) and are properly serialized as soon as you receive it.
 - (vii) Questions/attempted after leaving blank page/s in the Answer-book would not be evaluated.
 - (viii) All questions are compulsory.
 - (ix) (Log Table may be asked if needed).
 - (x) Marks allotted to each question are indicated against each question.

1.	Define Molarity.	1
2.	Define Molality.	1
3.	What is Doping?	1
4.	What are Ferromagnetic Substances?	1
5.	What is Inert pair effect?	1
6.	Define Harmonies with example.	1
7.	Complete the following reaction $\text{C}_6\text{H}_6 + \text{RCOCl} \xrightarrow[\text{AlCl}_3]{\text{anhydrous}}$	1
8.	Name the disease caused by deficiency of Vitamin B ₁ .	1
9.	Convert Benzene to Benzoic acid.	1
10.	Define isoelectric point of L-amino acids.	1
11.	Explain Saponification with example	2
12.	Give preparation and one use of Teflon.	2
13.	What are disaccharides? Give an example & write chemical formulas.	2
14.	Discuss between formic acid & Acetic acid.	2
15.	Why is carbon nitrogen bond length in aromatic amines shorter than in aliphatic amines?	2
16.	How will you distinguish between phenol & Ethanol.	2
17.	Benzaldehyde is less reactive than acetaldehyde towards nucleophilic addition reaction. Why?	2
18.	Compare the acidic strength of phenol & carboxylic acid.	2
19.	Explain with reaction oxidation of primary & secondary alcohols.	
20.	Give reason for the higher boiling point of ethanol in comparison to methoxy methane.	2
21.	Describe Aldol condensation. Aldehydes are more reactive than ketones. why?	1+2=3

22. Why aliphatic amines are stronger bases than aromatic amines? why do primary amines have higher boiling point than tertiary amines? 1+2=3
23. Differentiate between Nucleosides & Nucleotides. 3
24. Describe the following with one example in each case.
1. Tranquillizers
 2. Anti fertility drugs
25. Explain addition polymerization and condensation polymerization with suitable example. 3
26. (a) How will you prepare aniline from Nitrobenzene 3
 (b) why do amines dissolve in mineral acids. 3
27. Differentiate between oil & fats. Give their uses . 3
28. Describe the following terms
- (i) Gene
 - (ii) Genetic code
 - (iii) Codon 3
29. Explain dehydrogenation of primary & secondary alcohols $\frac{1}{2} + \frac{1}{2} = 3$
30. Explain Mutarotation with example. How will you differentiate between reducing & Non reducing sugars? $\frac{1}{2} + \frac{1}{2} = 3$
31. What is Lanthanoid contraction? Give consequences of Lanthanoid contraction with suitable example.

or

Why do d & f block elements show variable oxidation state? Why do they show magnetic behaviour? Explain it with the example of Mn(25) and Cu(29).

$1+1+2+1=5$

32. Give IUPAC Name of $K_3 [Co(C_2O_4)_3]$. Why $[Cr(NH_3)_6]^{3+}$ is paramagnetic while $[Ni(CN)_4]^{2-}$ is diamagnetic? Explain.

or

K_2PtCl_6 is a well known compound where a corresponding Ni Compound is not known? Why are the ionisation energies of 5d transition elements greater than those of 3d & 4d elements.

$1+2+2=5$