

E 7107

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Reg. No.....

Name.....

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, OCTOBER 2017

Fifth Semester

Core Course—BASIC ORGANIC CHEMISTRY-II

(Common for B.Sc. Chemistry Model I and Model II, B.Sc. Petrochemicals and B.Sc. Chemistry Environment and Water Management)

[2013 Admission onwards]

Time : Three Hours

Maximum Marks : 60

Part A

Answer all questions. Each carries 1 mark.

1. Gomberg reaction takes place in ——— condition.
2. Auxochromes when introduced in coloured molecule causes ———.
3. All thermal reactions involve ———.
4. The monomers of Nylon 6, 6 are ———.
5. What is ABS ?
6. Give the structure of paracetamol.
7. What is Berford's reagent ?
8. How many different sets of equivalent protons do the compound $\text{CH}_3 - \text{CHCl} - \text{CH}_2 - \text{Cl}$ have ?

(8 × 1 = 8)

Part B

Answer any six questions. Each question carries 2 marks.

9. What is Hoffmann bromamide reaction ?
10. Give the uses of phenylhydrazine.
11. What are mordant dyes ? Give two examples.
12. What is patterno-Buchi reaction ?
13. What are synthetic rubber's ? Give two examples.
14. Explain the structure of butadiene.
15. Give the structure and applications of Analgine.
16. Explain the reaction of Schiff's reagent with aldehyde.

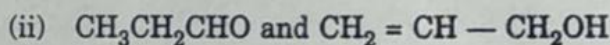
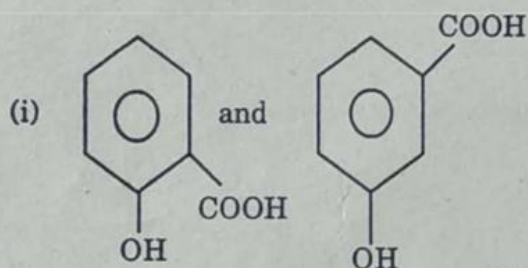
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17. How will you distinguish acetaldehyde from acetone by their IR spectra ?
 18. Explain the cleansing action of soap.

(6 × 2 = 12)

Part C*Answer any four questions. 4 marks each.*

19. How is nitrobenzene reduced in different reagent media ? Explain.
 20. Discuss Gabriel-Phthalimide reaction and their importance.
 21. Give the preparation and uses of alizarin.
 22. Write the synthesis and applications of epoxy resins and poly urethanes.
 23. Give the synthetic application of NBS and O_3 O_4 .
 24. How would you differentiate between the following pairs of compounds using infrared spectra ?



(4 × 4 = 16)

Part D*Answer any two questions. Each question carries 12 marks.*

25. What are Diazonium Salts ? How are they prepared what are their uses ?
 26. (a) Discuss the Synthetic applications of diazo methane and diazoacetic ester.
 (b) Give the preparation and uses of methyl orange and Bismarkbrown.
 27. (a) Write notes on :
 (i) Drugs cancer therapy.
 (ii) Environmental aspects of LAS detergents.
 (b) Explain the relative stability of Cyclobexane and Cyclo Butane.
 28. (a) Explain the principle of IR spectroscopy.
 (b) Give the NMR spectral characteristics of acetaldehyde and acetone.
 (c) A compound having molecular formula $C_{10}H_{14}$ gave the following p.m.r. data :
 (i) A singlet, τ 9.12 (δ 0.88), $_9H$.
 (ii) A singlet, τ 2.72 (δ 7.28), $_5H$

Give a structure of the given compound consistent with the above data ?

(2 × 12 = 24)