



C20-CHPC-303

7281

**BOARD DIPLOMA EXAMINATION, (C-20)
OCTOBER/NOVEMBER—2023**

DCHE – THIRD SEMESTER EXAMINATION

ORGANIC AND PHYSICAL CHEMISTRY

Time : 3 Hours]

[Total Marks : 80

PART—A

3×10=30

- Instructions :** (1) Answer **all** questions.
(2) Each question carries **three** marks.
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Write the classification of organic compounds.
2. Write the IUPAC names of HCHO and HCOOH.
3. Define polymerization and write the types of polymerization.
4. Write any two preparation methods for aniline.
5. Define electrolytes and write examples.
6. Write any three applications of electrolysis.
7. Write the differences between homogeneous and heterogeneous equilibria.
8. Write the characteristics of chemical equilibrium.
9. Define heat of formation and write an example.
10. Define internal energy and write the equation of it.

- Instructions :** (1) Answer **all** questions.
(2) Each question carries **eight** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. (a) Write any two preparation methods and any two chemical properties of acetylene.

(OR)

(b) Explain chain and functional isomerisms with examples.

12. (a) Explain Reimer-Tiemann reaction and carbylamines test.

(OR)

(b) Explain the preparation of diethyl ether by (i) Williamson's synthesis and (ii) dehydration of ethyl alcohol.

13. (a) Write any two preparation methods and any two chemical properties of nitrobenzene.

(OR)

(b) Explain Huckel's rule of aromaticity and give an example.

14. (a) Write the differences between electrolytic conduction and metallic conduction.

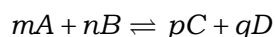
(OR)

(b) Explain Faraday's laws of electrolysis.

15. (a) Explain Le Chatelier's principle for the formation of SO₃ in contact process.

(OR)

(b) Explain law of mass action to the following equation :



PART—C

10×1=10

- Instructions :** (1) Answer the following question.
(2) The question carries **ten** marks.
(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

16. Differentiate between aldehydes and ketones with chemical equations.

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