

B.Sc. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2023.

Second/Fourth Semester

Chemistry — Allied

ALLIED CHEMISTRY — II

(For those who joined in July 2017–2020)

Time : Three hours

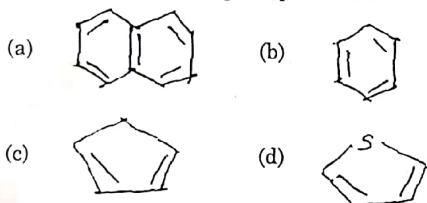
Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Which of the following compound is not aromatic?



7. Which of the following compound is present in natural gas?

- (a) Urea (b) Benzoyl peroxide  
(c) Methane (d) Sulphonic acid

8. Ammonium sulphate can be produced by reacting gypsum with \_\_\_\_\_

- (a) ammonia  
(b) ammonium carbonate  
(c) nitric acid  
(d) none of these

9. The following disease is water-borne disease

- (a) scurvy (b) tuberculosis  
(c) hepatitis - B (d) typhoid

10. Antibiotics are used to treat infections by \_\_\_\_\_

- (a) virus  
(b) bacteria  
(c) all the microorganisms  
(d) none of the above

2. This can be a halide in the Friedal crafts reaction?

- (a) Chloroethane (b) Chlorobenzene  
(c) Bromobenzene (d) Isopropyl chloride

3. \_\_\_\_\_ have same atomic numbers but different atomic masses.

- (a) Isotope (b) Atom  
(c) Radioisotope (d) None of these

4. Hydrogen bomb is based on the phenomenon of \_\_\_\_\_

- (a) Nuclear explosion (b) Chemical reaction  
(c) Nuclear fusion (d) Nuclear fission

5. Which of the following is the simplest form of carbohydrate?

- (a) Carboxyl groups  
(b) Aldehyde and ketone groups  
(c) Alcohol and carbonyl groups  
(d) Hydroxyl groups

6. The simplest aminoacid is \_\_\_\_\_

- (a) glycine (b) alanine  
(c) asparagine (d) tyrosine

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Explain Huckel's rule with an example of benzenoid and non benzenoid compounds.

Or

- (b) Write the preparation of haphthalene by Haworth synthesis.

12. (a) Write a short notes on n/p ratio?

Or

- (b) Explain radiocarbon dating.

13. (a) What are carbohydrates? Explain the classification of them.

Or

- (b) What are the differences between DNA and RNA?

14. (a) What are the advantages of gaseous fuel over solid and liquid fuels?

Or

- (b) How is urea prepared? What are its uses?

15. (a) Write a short note on insect – borne diseases.

Or

(b) Explain the Hereditary diseases.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Describe the structural elucidation of benzene.

Or

(b) Discuss the chemical reactions of anthracene.

17. (a) Write a note on :

(i) Binding energy

(ii) Packing fraction.

Or

(b) Explain the application of nuclear fusion.

18. (a) How are proteins classified on the basis of their chemical composition?

Or

(b) Explain in detail about the composition of nucleic acids.

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19. (a) Explain fuel gases with suitable examples.

Or

(b) Discuss the manufacture of soap.

20. (a) Explain the Indian medicinal plants and trees.

Or

(b) Write a notes on :

(i) Analgesics

(ii) Antipyretics

(iii) Sulpha drugs.

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