UG–CS-1191 BCHESA–31

U.G. DEGREE EXAMINATION — FEBRUARY, 2023.

Physics / Botany / Zoology

Third Semester

GENERAL CHEMISTRY – I

Time : 3 hours Maximum marks : 70

PART A — ($3 \times 3 = 9$ marks)

Answer any THREE questions out of Five.

1. Cations are smaller in size while anions are larger in size than the corresponding atoms. Why?

2. State nucleophilic substitution reaction with an example.

3. Differentiate positive and negative catalyst.

4. Mention the occurrence and deficiency diseases caused by vitamin – K.

5. How can you save ozone layer? Explain.

PART B — ($3 \times 7 = 21$ marks)

Answer any THREE questions out of Five.

6. What is ionic bond? Explain the factors affecting and formation of KCl molecule.

7. What are organic reactions? Explain how electrophiles and nucleophiles formed.

8. Discuss the general characteristics of catalyst.

9. What are carbohydrates? Discuss briefly its classification.

10. Write note on green house effect.

PART C — ($4 \times 10 = 40$ marks)

Answer any FOUR out of Seven.

11. (a) Define the term chemical bond. Mention the significance. (5)

    (b) Explain the formation of coordinate covalent bond with suitable example. (5)

12. Describe various types of reactions found in organic chemistry with examples. (10)

13. Write a, note on (a) Enzyme catalysis (b) Acid-base catalysis. (5 + 5)

14. What are monosaccharides? Explain the chemical properties of glucose. (10)

15. Discuss the effects radioactive pollution and radioactive waste disposal. (10)

16. (a) Give a short introduction on the classification of vitamins. (5)

    (b) Explain the physical and chemical properties of fructose. (5)

17. Mention the sources of water pollution. Describe its prevention and water treatment. (10)

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UG–CS–1192 BZOOS–31

U.G. DEGREE EXAMINATION — FEBRUARY 2023

Zoology

Third Semester

VERTEBRATE ZOOLOGY – I

Time : 3 hours Maximum marks : 70

PART A — (3 × 3 = 9 marks)

Answer any THREE questions out of Five questions in 100 words.

All questions carry equal marks.

Write short notes on:

1. Gill Slits
2. Cephalochordata
3. Ammocoete larvae
4. Spiral Valve
5. Caudata

PART B — $(3 \times 7 = 21$ marks)

Answer any THREE questions out of Five questions in 200 words.

All questions carry equal marks.

6. Write the salient features of chordate animals.

7. Discuss the systemic position of urochordata.

8. Describe the external features of *Petromyzon*.

9. Highlight the economic importance of fishes.

10. Write short notes on limbless amphibians.

PART C — $(4 \times 10 = 40$ marks)

Answer any FOUR questions out of Seven questions in 500 words.

All questions carry equal marks.

11. Explain the origin of chordates.

12. Describe the development of *Balanoglossus* and highlight the significance of its larval form.

13. Write a detail account on the phylogenetic status of Cyclostomata.

14. Write an essay on fish migration.

15. Give a detail account on the different modes of respiration in frog.

16. Classify chordates up to order.

17. Write in detail about the accessory respiratory organs of fishes.

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