

UG-355

BCHEA-02

**B.Sc. DEGREE EXAMINATION –
DECEMBER 2019.**

Second Year

Chemistry

ANIMAL DIVERSITY

Time : 3 hours

Maximum marks : 75

PART A — (3 × 5 = 15 marks)

Answer any THREE questions.

1. What are the three classes of fishes? Brief them.
2. Describe the structure and function of flame cell.
3. Write a short note on Lamellidens.
4. Describe the excretory system of shark with illustrating diagram of nephron.
5. Explain the anatomy of rabbit's digestive system.

PART B — (4 × 15 = 60 marks)

Answer any FOUR questions.

6. List out the characteristic features of amphioxus.
 7. Illustrate the structure of obelia colony in detail.
 8. Give a detailed account on thoracic appendages of prawn.
 9. Demonstrate the circulatory system of frog.
 10. Elaborate the excretory system of pigeon.
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BCHE-22

**B.Sc. DEGREE EXAMINATION —
DECEMBER, 2019.**

Second Year

Chemistry

GENERAL CHEMISTRY – IV

Time : 3 hours

Maximum marks : 75

PART A — (3 × 5 = 15 marks)

Answer any THREE questions

1. What are the difference between
 - (a) Calcination and roasting
 - (b) Ore and minerals
2. Explain green chemical synthesis of paracetamol.
3.
 - (a) What is pseudohalogens? Give two example.
 - (b) Give two difference between halogen and pseudohalogen.

4. List any five alloys with composition and their uses.
5. What are carbohydrates? How they are classified?

PART B — ($4 \times 15 = 60$ marks)

Answer any FOUR questions.

6. Explain the following terms with examples
 - (a) Ion exchange technique for purification of metals
 - (b) Froth floatation process
 - (c) Zone refining
7.
 - (a) Give twelve principle of green chemistry. (10)
 - (b) Discuss: Microwave assisted green synthesis. (5)
8.
 - (a) List the anomalous behavior of oxygen. (5)
 - (b) Predict the structure and shape of XeF_2 , XeF_4 , XeF_6 , XeOF_2 and XeOF_4 . (10)

9. (a) Compare lanthanide and actinide elements. (5)
- (b) Discuss the metallurgy of uranium. (10)
10. (a) What are hormones? Describe male and female sex hormone. (10)
- (b) What are the symptoms of the diseases caused by the deficiency of vitamin A? (5)
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BCHE-21

**B.Sc. DEGREE EXAMINATION —
DECEMBER, 2019.**

Second Year

Chemistry

Paper – 1 :GENERAL CHEMISTRY–III

Time : 3 hours

Maximum marks : 75

PART A — (3 × 5 = 15 marks)

Answer any THREE questions.

1. Explain any five periodic properties of alkali metals.
2. Discuss the structure of diborane and produce the evident on bridge structure.
3. What is aromatic electrophilic substitution reaction? Explain with an example.
4. Write a short note on Arrhenius concept of energy of activation.
5. Describe step involved in the synthesis of coniine.

PART B — (4 × 15 = 60 marks)

Answer any FOUR questions.

6. What is meant by diagonal relationship? In what respects does lithium resemble magnesium?
7. Write the details notes on various allotropic forms of carbon.
8. Describe the reaction mechanism of the following reaction.
 - (a) Friedel–Craft’s alkylation
 - (b) Reimer–Tiemann reaction
 - (c) Gattermann-Koch reaction
9. Write the methods of determination of the rate of reaction. Derive the rate equations of First and zero order reaction with example.
10. Elucidate the structure and write synthesis of limonene.
