

Total No. of Questions 16]

Hall No.

[Total No. of Printed Pages 6

11<sup>th</sup>ARNKD(W/Z) JKLUT-2025

1211-C

**BIOLOGY**  
**(ZOOLOGY)**

(each)

Time : 1 ½ Hours]

[Maximum Marks : 35

**Note:- "Attempt any 30 Marks out of 35 Marks".**

**SECTION-A**

**(Objective Type Questions)**

(1 mark each)

1. When the impulse jumps across the nodes of Ranvier in myelinate

axon, it is called .....  
*SALTATORY*  
*conduction*

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2. **Vasopressin is synthesized in:**
- (a) **Hypothalamus**
  - (b) **Adrenal gland**
  - (c) **Kidney**
  - (d) **Adenohypophysis**
3. **Which of the following is the biggest/largest by area in India?**
- (a) **Kishtwar National Park**
  - (b) **Salim Ali National Park**
  - (c) **Dachigam National Park**
  - (d) **Hemis National Park**

4. Prophase is characterized by the condensation of chromosomal material into compact chromosomes.

(True/False)

5. 'Radula' the feeding organ is found in:

(a) Arthropoda

(b) Annelida

(c) Hemichordata

(d) Mollusca

### SECTION-B

(Very Short Answer Type Questions)

(2 marks each)

6. Draw a diagrammatic sketch of digestive system of a frog. Label the diagram.

7. What are Nucleic acids? Write their main functions.

8. Differentiate cell wall from a cell membrane (Only two differences needed).

9. What are Semi-autonomous organelles in a cell? Give a brief account of any such organelle you know.

10. What is Erythroblastosis foetalis? How can it be prevented?

**SECTION-C**

**(Short Answer Type Questions)**

**(3 marks each)**

Write down the salient features of Phylum Annelida. What is the role of Nephridia in these animals?

12. Five Kingdom classification has classified Eukaryotic animals under Kingdom Animalia, which is further divided into chordata and non-chordata. Give a Flowchart (Sketch) of classification of Phylum chordata upto class level. Also show where the 'Man' is placed in this classification.
13. What are Enzymes? Explain the physical properties of Enzymes.
14. What do you know about cytoskeleton? What is centriole and its function.
15. Write a short note on Transportation of gases in human beings.

**SECTION-D****(Long Answer Type Question)**

(5 marks)

16. Explain the structure and function of the human Nephron. How does it contribute to urine formation?

**OR**

Explain the organisation of the human skeleton. Distinguish between Axial and Appendicular skeleton with examples.

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Total No. of Questions : 16]

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1210-C

**BIOLOGY**  
**(BOTANY)**

sum

Time : 1½ Hours]

[Maximum Marks : 35

**Note:- "Attempt any 30 Marks out of 35 Marks".**

**SECTION-A**

**(Objective Type Questions)**

(1 mark each)

1. As we move from species to kingdom in a taxonomic hierarchy, the number of common characteristics:

- (a) Will decrease
- (b) Will increase
- (c) Remain same
- (d) May increase or decrease

2. Which of the following is a prokaryote?

(a) *Amoeba*

(b) *Bacteria*

(c) *Spirogyra*

(d) *Euglena*

3. Arrangement of sepals or petals in a flower bud of a plant is called

(a) **Phyllotaxy**

(b) **Aestivation**

(c) **Placentation**

(d) **Inflorescence**

4. Conjoint, and open vascular bundles are found in:

- (a) Monocot stem
- (b) Monocot root
- (c) Dicot stem
- (d) Dicot root

5. Primary  $\text{CO}_2$  acceptor in  $\text{C}_3$  plants is:

- (a) PEP
- (b) Oxaloacetate
- (c) 3 - PGA
- (d) RuBP

**SECTION-B****(Very Short Answer Type Questions)**

(2 marks)

6. Describe the structural components of *Lichens*.
7. What is ICBN? What is its purpose?
8. Differentiate between Brown Algae and Red Algae on the basis of pigments and stored food.
9. Give any two differences between the vascular bundles of monocot stem and dicot stem.
10. Differentiate between Endarch and Exarch Condition.

**SECTION-C**

**(Short Answer Type Questions)**

**(3 marks each)**

- ✓ 11. Write down the universal rules for Binomial nomenclature.
- ✓ 12. What are the salient features of Kingdom Monera?
- ✓ 13. What criteria were used by Whittaker to classify organisms into five Kingdoms?
- ✓ 14. Define Respiratory Quotient. What is its value for different substrates?
- ✓ 15. Name various plant growth promoters. List the uses of any one of them.

**SECTION-D**

**(Long Answer Type Questions)**

(5 marks)

16. Give a schematic account of Glycolysis. Where does it occur?

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**OR**

Describe non-cyclic photophosphorylation in plants.

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