

# HALF YEARLY EXAMINATION- 2022

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**CLASS : 11**

**BIOLOGY**

**MARKS : 70**

**TIME : 3.00 Hrs**

**Instructions:** 1. Check the Question paper for fairness of printing. If there is any lack of fairness, inform the Hall Supervisor immediately. 2. Use Blue or Black ink to write and underline and pencil to draw diagrams.

### BIO - BOTANY - SECTION-I

**8 x 1 = 8**

**Answer all the questions choose the correct answers.**

1. Which the plant group has gametophyte as a dominant phase?  
a) Angiosperms                      b) Pteridophytes                      c) Bryophytes                      d) Gymnosperme
2. Phyllotaxy found in Calotropis is  
a) Alternate                      b) Opposite decussate                      c) Opposite superposed                      d) Ternate
3. Aggregate fruit develops from  
a) Multicarpellary, syncarpous ovary                      c) Multicarpellary ovary                      d) Whole inflorescence
4. The pairing of Homologous chromosomes on meiosis is known as  
a) Disjunction                      b) Synergiels                      c) Bivalent                      d) Synapsis
5. Identify the correct statement.  
a) PS II is found in the outer membrane of thylakoid  
b) PS I is found in the inner membrane of thylakoid  
c) PS I is found in stromal lamella  
d) PS II is found in granal lamella

6. **Match the following.**

- |                       |                     |
|-----------------------|---------------------|
| 1. Human urine        | i) Auxin B          |
| 2. Corn grain oil     | ii) GA <sub>3</sub> |
| 3. Fungi              | iii) Abscissic acid |
| 4. Herring sperm      | iv) Kinetin         |
| 5. young corn grain   | v) Auxin A          |
| 6. young cotton fruit | vi) Zeatin          |

- a) 1 - iii, 2 - iv, 3 - v, 4 - vi, 5 - i, 6 - ii                      b) 1 - v, 2 - i, 3 - ii, 4 - iv, 5 - vi, 6 - iii  
c) 1 - iii, 2 - v, 3 - vi, 4 - i, 5 - ii, 6 - iv                      d) 1 - ii, 2 - iii, 3 - v, 4 - vi, 5 - iv, 6 - i

7. **Assertion** : Gaseous exchange takes place freely in cortex  
**Reason** : Cortex contain parenchyma cells. Parenchyma cells contain intercellular spaces which aids in gaseous exchange.

- a) (A) is correct (R) is wrong  
c) (A) is wrong (R) is correct

- b) (A) is correct (R) explains (A)  
d) Both (A) and (R) are wrong

8. For every CO<sub>2</sub> molecule entering the C<sub>3</sub> cycle, the number of ATP and NADPH required are  
a) 3 ATP + 3 NADPH                      b) 2 ATP + 2 NADPH                      c) 2 ATP + 3 NADPH                      d) 3 ATP + 2 NADPH

### SECTION - II

**4 X 2 = 8**

**II Answer any four question.**

9. Draw a neat labelled diagram of open vascular bundle.
10. Define - Bolting.
11. What is substrate phosphorylation?
12. How root climbers differ from stein climbers?
13. What is Plectostele?
14. Mention the different types of plasmalysis seen in plant cells.

### SECTION- III

**3 X 3 = 9**

**III Answer any three question. Question no 19 is compulsory.**

15. Write short note on: a) Gynostegium. b) Heterostemonos
16. What is flagellin ?
17. List out any three physiological effects of cytokinin.
18. In which season the vessels of angiosperms are larger in size. Why ?
19. Differentiate DNA and RNA

### SECTION - IV

**2 X 5 = 10**

**Answer all questions.**

20. Write about the steps involved in Gram staining. (OR) Describe the structure of protein.
21. Give the floral characters & Datura metal (OR) Write down the cytoplasm series reactions occurring in the cytoplason during respiration.

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## BIO - ZOOLOGY (PART-I)

1 X 8 = 8

Choose the correct answer.

1. Who coined the term biodiversity?  
a) Walter Rosen                      b) AG Tansley                      c) Aristotle                      d) AP de Candole.
2. Nephridia of Earthworms are performing the same function as  
a) Gills of prawn    b) Flame cells of planaria    c) Trachea of insects    d) Nematoblasts of Hydra
3. Kidney of frog is  
a) Archinephros                      b) Pronephros                      c) Mesonephros    d) Metanephros
4. **Assertion:** (A) Large intestine also shows the presence of Villi like small intestine.  
**Reason** : (B) Absorption of water takes place in large intestine.  
a) Both A and B are true and B is the correct explanation of A.  
b) Both A and B are true but B is not the correct explanation of A.  
c) A is true but B is false.                      d) A is false but B is true.
5. Dub Sound of heart is caused by  
a) closure of atrio-ventricular valves                      b) opening of semi-lunar valves  
c) closure of semi-lunar valves                      d) opening of atrio - ventricular valves
6. Identify the wrong match.  
a) Bowman's capsule                      -    Glomerular filtration  
b) DCT                      -    Absorption of glucose  
c) Henle's loop                      -    Concentration of urine  
d) PCT                      -    Absorption of Na<sup>+</sup> and K<sup>+</sup> ions.
7. Inflammation of joints due to accumulation of uric acid crystals results in  
a) Gout                      b) Osteoporosis                      c) Rheumatoid arthritis    d) Osteoarthritis
8. Which one of the following statement is correct?  
a) calcitonin and thymosin are thyroid hormones  
b) Pepsin and prolactin are secreted in stomach  
c) Secretin and rhodopsin are polypeptide hormones  
d) Cortisol and aldosterone are steroid hormones

## PART-II

4 X 2 = 8

Answer any four questions.

9. How Aristotle classified animals?
10. Compare open and closed circulatory system.
11. Draw a labelled diagram of a nerve cell.
12. Write short note on clitellum.
13. How male frog differs from female frog?
14. Classify the cattle breeds based on its purpose.

## PART-III

3 X 3 = 9

Answer any three questions. &amp; No. 19 is Compulsory.

15. Mention the salient features of Phylum Annelida.
16. Write about protein deficiency disorders.
17. How the body makes long-term adjustments when living in high altitude?
18. Differentiate osmoregulators and osmoconformers with example.
19. Briefly describe the types of joints.

## PART-IV

2 X 5 = 10

Answer all the questions.

20. a) Explain how animals can be classified based on the patterns of symmetry with an example.  
(OR) b) Write short note on the refractive errors of eye.
21. a) Describe the events of Cardiac cycle.  
(OR) b) Write an account on the secretions of Adenohypophysis.