

11**R**

Time: 3.00 hrs.

Half-Yearly Examination - 2022

BIOLOGY

Reg. No.

--	--	--	--	--	--

Max. Marks : 70

BIO - BOTANY (Marks 35)

PART - I

Choose the correct answer

8 x 1 = 8

1. Of an angiosperm plant haploid chromosome number is 14. What is the number of chromosome in its endosperm tissue? a) 7 b) 4 c) 42 d) 28
2. Which part of leaf in Nepenthus plant is modified into tendril?
a) Petiole b) Midrib c) Leaf surface d) Leaf tip
3. Alkaline amino acid
a) Arginine b) Histidine c) Glycine d) Glutamine
4. What does stomatal opening depend on? a) Entry of potassium ion b) Excretion of potassium ion
c) Entry of chloride ion d) Entry of hydroxyl ion
5. Which element is non-replaceable?
a) Phosphorus b) Potassium c) Calcium d) Nitrogen
6. Glycolysis and Krebs cycle connecting compound is
a) Succinic acid b) Pyruvic acid c) Acetyl CoA d) Citric acid
7. Each CO_2 Molecules entering the C_3 cycle require.....ATP and.....NADPH.
a) 2 ATP + 2 NADPH b) 2 ATP + 3 NADPH c) 3 ATP + 2 NADPH d) 3 ATP + 3 NADPH
8. To know the phylogeny which of the following sequences are used?
a) mRNA b) tRNA c) rRNA d) HnRNA

PART - II

Answer any 4 questions

4 x 2 = 8

9. What is the importance of imbibition?
10. Draw a diagram of an open vascular bundle and label the parts.
11. Write functions of seeds. (any 2)
12. Define - Respiratory Quotient.
13. Krebs cycle is amphibolic. Give reason.
14. Write 2 differences between sap wood and heart wood.

PART - III

Answer any 3 questions (Question No.18 compulsory)

3 x 3 = 9

15. Write the importance of Mycorrhizae.
16. Write any 3 rules of nomenclature.
17. Draw a picture of mitochondria and label the parts.
18. Describe Emersons' enhancement effect.
19. What are the applications of Vernalization?

PART - IV

Answer in detail

2 x 5 = 10

20. Explain the types placentation. (OR)
Write the differences between C_3 and C_4 plants.
21. List the differences between mitosis and meiosis. (OR)
Write the biological effects of Gibberellin.

BIO - ZOOLOGY (Marks 35)**SECTION - A****Choose the correct answer****8 x 1 = 8**

- Of classification, without regard to quality each unit is.....
a) Taxon b) Genus c) Species d) Strain
- Legless amphibians
a) Ethiochelys b) Hyla c) Rana d) Salamander
- Squamous epithelium is seen in
a) skin b) digestive tract c) gall bladder d) trachea
- Which of the following is not a function of liver
a) Insulin production b) Detoxification c) Glycogen storage d) Bile water production
- Breathing capacity of a normal human being
a) 800 ml b) 1200 ml c) 500 ml d) 1100-1200 ml
- To which blood group does a person have A and B antigens on the surface of erythrocytes?
a) A b) B c) AB d) O
- Product of ornithine cycle is
a) Carbon dioxide b) Uric acid c) Urea d) Ammonia
- What is isinglass used for?
a) Preparation of wine b) To purify wine c) Filtration of wine d) Canning of wine

SECTION - B**Answer any 4 questions.****4 x 2 = 8**

- Why flatworms are called acoelomate?
- Distinguish between tergum and sternum.
- How does one's body heal to live together at higher altitudes above sea level?
- Mention 3 hormones that regulate kidney function.
- Draw the diagram of nerve cell and label its parts.
- Define Cross breeding.

SECTION - C**Answer any 3 questions. (Question no.18 compulsory)****3 x 3 = 9**

- Why Mule is sterile in nature?
- Differentiate white adipose tissue from brown adipose tissue.
- Why are villi present in the intestine and not in the stomach?
- How is Tetany caused?
- Comment on Homeostasis.

SECTION - D**Answer in detail.****2 x 5 = 10**

- a) Can we use recent molecular tools to identify and classify organism?
(OR)
b) Describe the mechanism by which the human heart beat is initiated and controlled.
- a) List the chemical changes that starch molecule undergoes from the time it reaches the small intestine. (OR)
b) What are the nutritive values of fishes?