

FIRST REVISION TEST - 2025

BIOLOGY

12 - Std

Time : 3.00 Hrs

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Marks : 70

BIO - BOTANY PART - A

I Answer all of the following :-

8 X 1 = 8

1. Gecko lizard is the agency of the following
a) Pollination b) Fruit dispersal c) Seed dispersal d) Fruit germination
2. Identify the in correct pair
a) Sporopollenin - Exine of Pollen grain
b) Tapetum - Nutritive tissue for developing microspores
c) Nucellus - Nutritive tissue for developing embryo
d) Obturator - Directs the Pollentube into micropyle
3. Among the following characters which one was not considered by Mendel in his experimentation Pea?
a) Stem - Tall or Dwarf
b) Trichome - Glandular or Non - Glandular
c) Seed - Green or Yellow
d) Pod - Inflated or constricted
4. Match the following :-
a) Law of Segregation - (i) Sex of the organism
b) Reciprocal cross - (ii) No Blending or genes
c) Back Cross - (iii) Purity of gametes
d) Incomplete dominance - (iv) F1 X parent
a) a-iii, b-i, c-iv, d-iii b) a-iii, b-iv, c-i, d-ii c) a-i, b-ii, c-iii, d-iv d) a-iii, b-ii, c-i, d-iv
5. Which of the following is incorrectly paired?
a) Wheat - Himgiri b) Milch breed - Sahiwal c) Rice - Ratna d) Pusa Komal - Brassica
6. The time duration for sterilisation process by using autoclave is minutes and the temperature is
a) 10 to 30 min and 125°C b) 15 to 30 min and 121°C
c) 15 to 20 min and 125°C d) 10 - 20 min and 121°C
7. Ophrys an Orchid resembling the female of an insect so as to able to get pollinated is due to phenomenon of
a) Myrmecophily b) Ecological equivalents c) Mimicry d) Ecotone
8. Depletion of which gas in the atmosphere can lead to an increased incidence of skin cancer?
a) Ammonia. b) Methane c) Nitrous oxide d) Ozone

Part - B

II Answer any four of the following :-

4 X 5 = 8

9. Write the transformation of the following floral parts after fertilisation.
a) Nucellus b) Inner integument c) Secondary nucellus d) Funicle
10. What are multiple alleles?
11. What are epiphytes? Given an example.
12. Define - Food web.
13. What are the materials used to grow microorganisms like Spirulina?
14. Write any two uses of Turmeric.

PART - C

Write any three of the following questions number 19 is compulsory :-

3 X 3 = 9

15. What is Biofortification?
16. What is inversive species? Write any two examples.
17. Define Cryopreservation.
18. Describe the mutual relationship between the Fig and Wasp and comment on the Phenomenon that operates in this relationship.
19. What is gene mapping? Write its uses.

PART - D

Answer the questions :-

2 X 5 = 10

20. a) Give a detailed account on Parthenocarpy. Add a note on its significance. (OR)
b) Explain the Mechanism of crossing over.
21. a) List out the benefits of Agroforestry. (OR)
b) Explain the following with labelled diagram. i. Ti plasmid ii. PBR 322.

BIO-ZOOLOGY

MARKS: 35

PART - A**CHOOSE THE BEST ANSWER:**

8 x 1 = 8

- The process which the sperm undergoes before penetrating the ovum is _____.
a) spermiation b) cortical reaction c) spermiogenesis d) capacitation
- A marriage between a colourblind man and a normal woman produces _____.
a) All carrier daughters and normal sons b) 50% carrier daughters and 50 % normal daughters
c) 50% colourblind sons and 50% normal sons d) All carrier offsprings
- Identify the incorrect pair.
a. Lac z gene - β galactosidase
b. Lac y gene - permease
c. Lac a gene - transacetylase
d. Lac y gene - transacetylase
- Paratope is an _____.
a) antibody binding site on variable regions b) antibody binding site on heavy regions
c) antigen binding site on variable regions d) antigen binding site on heavy regions
- The Pasteur effect is the inhibiting effect of _____ on the fermentation process.
a) oxygen b) carbon di oxide c) hydrogen d) nitrogen
- Transgenic animals are those which have _____.
a) foreign DNA in some of their cells b) foreign DNA in all their cells
c) foreign RNA in some of their cells d) foreign RNA in all their cells
- The relationship between crocodile and bird is _____.
a) amensalism b) mutualism c) commensalism d) competition
- Which one of the following are at high risk of extinction due to habitat destruction?
a) Mammals b) Birds c) Amphibians d) Echinoderms

PART - B**ANSWER ANY FOUR QUESTIONS:**

4 x 2 = 8

- Define cryptorchism?
- Write about Huntington's chorea?
- State one gene-one polypeptide hypothesis.
- What do you mean by antibiotic resistance?
- What is bioremediation?
- What are called agrochemicals?

PART - C**ANSWER ANY THREE QUESTIONS: (Q.No. 19 is compulsory)**

3 x 3 = 9

- Write a note on the phases of life cycle.
- Differentiate monocistronic and polycistronic.
- State the major functions of soil.
- Mention the reasons for the richness of biodiversity in the tropics.
- Brief any three methods of disposal of radioactive wastes.

PART - D**ANSWER THE FOLLOWING QUESTIONS:**

2 x 5 = 10

- a) Explain the process of spermatogenesis with a neat diagram. (OR)
b) Discuss the causes of infertility.
- a) Describe Darwin's theory of Natural selection. (OR)
b) Explain the steps involved in PCR. Add a note on its applications.

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