



Time: 3.00 Hours

Standard 12
BIOLOGY
Part - I (Bio-Botany)
Section - A

Marks: 70
Marks: 35

1213

I. Choose the best answer.**8x1=8**

- 1) Arrange the layers of another wall from locus to periphery
 - a) Epidermis, middle layers, tapetum, endothecium
 - b) Endothecium, epidermis, middle layers, tapetum
 - c) Tapetum, middle layers, epidermis, endothecium
 - d) Tapetum, middle layers, endothecium, epidermis
- 2) Which of the following explains how progeny can possess the combinations of traits that none of the parent possessed
 - a) Law of segregation
 - b) Chromosome theory
 - c) Law of independent assortment
 - d) Polygenic inheritance
- 3) Which one of the following is not correct statement
 - a) Ti plasmid causes the bunchy top disease
 - b) Multiple cloning site is known as polylinker
 - c) Non viral method transfection of Nucleic acid in cell
 - d) Polylactic acid is a kind of biodegradable and bioactive thermoplastic
- 4) Cryopreservation means it is a process to preserve plant cells, tissues or organs
 - a) at very low temperature by using ether
 - b) at very high temperature by using liquid Nitrogen
 - c) at very low temperature of -196°C by using liquid nitrogen
 - d) at very low temperature by using liquid nitrogen
- 5) A specific place in an ecosystem, where an organism lives and performs its function is
 - a) habitat
 - b) niche
 - c) Landscape
 - d) biome
- 6) Match list I with list II

List I	List II
1. Free living N ₂	a) Aspergillus
2. Iymbiotic N ₂	b) Amanita
3. P Solubilizing	c) Anabaena azolla
4. P Mobilizing	d) Azotobacter
a) 1-c 2-a 3-b 4-d	b) 1-d 2-c 3-a 4-b
c) 1-a 2-c 3-b 4-d	d) 1-b 2-a 3-d 4-c
- 7) The active principle trans-tetrahydrocandrial is present in
 - a) Opium
 - b) Curcume
 - c) Marijuana
 - d) Andrographis
- 8) Chipko movement was launched for the protection of
 - a) forests
 - b) livestock
 - c) wetlands
 - d) grasslands

Section - B**II. Answer any four of the following questions.****4x2=8**

- 9) Differentiate Grafting and layering
- 10) Give the types of synapsis
- 11) What is seaweed Liquid fertilizer
- 12) Mention the human activities that lead to produce green house effect?
- 13) What are the materials used to grow micro-organism like spirulina
- 14) Name the humors that are responsible for the health of human beings?

Section - C**III. Answer any three of the following questions. Q.No. 19 is compulsory. 3x3=9**

- 15) Write short notes on pBR322 with diagram
- 16) What are the reasons for Mendel's success in his breeding experiment?
- 17) Differentiate Somaclonal variation and gametoclonal variation
- 18) What is Albeds effect?
- 19) Write short notes on your study materials

Section - D

IV. Answer all the questions.

2x5=10

- 20) a) Explain the structure of mature anther with example
(OR)
b) Write the benefits and risks of genetically modified crops
- 21) a) Explain different types of hydrophytes with example
(OR)
b) What is hybridization? Explain the steps in hybridization.

Part - II (Bio-Zoology)

Marks: 35

Section - A

I. Choose the best answer. (With the answer with option)

8x1=8

- 1) Plasmotomy is observed in
- a) Pelomyxa b) Hydra c) Sea anemone d) Aurelia
- 2) Which of the following organs having strongest muscles in the human body
- a) Ovary b) Uterus c) Testes d) Ovarian Stroma
- 3) NACO was established in the year
- a) 1991 b) 1992 c) 2001 d) 2002
- 4) Haemophilia was first reported by
- a) Bertram b) Mendel c) Morgan d) John Cotto
- 5) was the Age of fishes
- a) Cambrian b) Ordovician c) Devonian d) Jurassic
- 6) Allergy involves
- a) IgE b) IgG c) IgA d) IgM
- 7) Crytoxins obtained from Bacillus thuringiensis are effective against for
- a) Bollworms b) Mosquitoes c) Nematodes d) Flies
- 8) The study of Animal behaviour under natural conditions called
- a) Ethology b) Ecology c) Ecosystem d) Evolution

Section - B

II. Answer any four questions.

4x2=8

- 9) What is meant by Organogenesis?
- 10) Note on Saheli?
- 11) Symptoms of Patau's syndrome?
- 12) What are interferons?
- 13) What is meant by Gene knock
- 14) What is zero stress?

Section - C

II. Answer any three. Q.No. 19 is compulsory.

3x3=9

- 15) Note on Eutrophication?
- 16) Differentiate prebiotics and probiotics
- 17) A brief account about Hepatitis?
- 18) Note on vestigial organs
- 19) Differentiate vasectomy from Tubectomy

Section - D

IV. Answer all questions.

2x5=10

- 20) Explain various Natural methods of Birth control
(OR)
A Brief account on ABO blood group
- 21) Write a brief account about PCR in clinical diagnosis
(OR)
What is Biomagnification? Explain with example