

XII-FP1

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Full Portion Test - 1

Standard XII

BIOLOGY

Time : 3.00 hrs.

Marks : 70

Instructions: 1) Check the question paper for fairness of printing. If there is any lack of fairness, inform the Hall Supervisor immediately.

2) Use Black or Blue ink to write and underline and pencil to draw diagrams.

Note: Candidate should answer Part - I (Botany) & Part - II (Zoology) in separate answer - books.

PART - I - BIO-BOTANY (MARKS : 35)

Section - A

8x1=8

Note: i) Answer all the questions.

ii) Choose the most suitable answer from the given four alternatives and write the option code and the corresponding answer.

1. Match and find the correct answer.

- | | |
|----------------------|--------------|
| A) Ovary | 1) Zygote |
| B) Ovule | 2) Endosperm |
| C) Secondary nucleus | 3) Seed |
| D) Egg | 4) Fruit |

a) A - 4, B - 3, C - 2, D - 1

b) A - 1, B - 2, C - 4, D - 3

c) A - 2, B - 1, C - 4, D - 3

d) A - 3, B - 2, C - 1, D - 4

2. Find the odd man out with reference to autotriploidy

- They can be produced artificially by crossing between autotetraploid & diploid
- They are highly fertile due to large number of gametes
- Cultivated triploid bananas are seedless having larger fruits than diploid
- Common doob cross is a natural autotriploid

3. Use of biology in industrial process and for improving quality of life is called

- Biotechnology
- Genetic engineering
- Eugenics
- Microbiology

4. Germ plasm conservation does not include

- DNA bank
- Seed bank
- Swiss bank
- Pollen bank

5. Read the given statements and select the correct option.

- Hydrophytes possess aerenchyma to support themselves in water
 - Seeds of *Viscum* are positively photoblastic as they germinate only in presence of light
 - Hygroscopic water is the only soil water available to roots of plant growing in soil as it is present inside the micropores.
 - High temperature reduces use of water and solute absorption by roots
- (i), (ii) and (iii) only
 - (ii), (iii) & (iv) only
 - (ii) and (iii) only
 - (i) and (ii) only

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6. Choose the incorrect pair.
- Humification - Detritus to dark humus
 - Eluviation - Movement of organic and inorganic compound to lower layer of soil
 - Detritus - Dead plants and animal waste
 - Fragmentation - Release of inorganic nutrients from the humus
7. Desired improved variety of economically useful crops are raised by
- Natural selection
 - Hybridization
 - Mutation
 - Biofertilisers
8. Assertion : Vegetables are important part of healthy eating.
Reason : Vegetables are succulent structures of plants with pleasant aroma and flavours.
- Assertion is correct, reason is wrong
 - Assertion is wrong, reason is correct
 - Both are correct and reason is the correct explanation for assertion
 - Both are correct and reason is not the correct explanation for assertion

Section - B

4x2=8

Note : Answer any four of the following questions.

- What is meant by pure breeding?
- What is biofortification?
- What are trichophyllus plants? Give example.
- Food web is known as basic unit of ecosystem. Why?
- Draw the pie diagram which shows relative contribution of green house gases.
- Kodomillet is medically useful. Discuss.

Section - C

3x3=9

Note: Answer any three questions. Q.No. 19 is compulsory.

- Comment on Aleurone Tissue.
- What are the characteristics of multiple alleles?
- What are the future prospects of Bio-technology?
- What is carbon cycle?
- How are microbial inoculants used to increase the soil fertility?

Section - D

2x5=10

Note : Answer the following questions.

- Briefly explain Trihybrid cross.

(OR)

 - Explain the separation & isolation of DNA using GEL electrophoresis.
- What is carbon foot print? How will you reduce this CFP?

(OR)

 - Tabulate the uses of common medicinal plants.

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PART - II - BIO-ZOOLOGY (MARKS : 35)

Section - A

8x1=8

Note: i) Answer all the questions.

ii) Choose the most suitable answer from the given four alternatives and write the option code and the corresponding answer.

1. Assertion : Offsprings produced by a sexual reproduction are genetically identical to the parent.

Reason : Asexual reproduction involves only mitosis and not in meiosis.

- a) Both assertion and reason are true and reason is the correct explanation for assertion
 b) Both assertion and reason are true but reason is not the correct explanation for assertion
 c) Assertion true but reason is false d) Both assertion and reason are false
2. becomes the graafian follicle
 a) Primary follicle b) Secondary follicle c) Tertiary follicle d) Primary Oocyte
3. Find the wrong statement.
 a) Thalassaemia related genes are in chromosome 16, 11
 b) Phenylketonuria related gene is in chromosome 12
 c) Albinism is due to lack of tyrosinase
 d) Huntington's chorea is due to allosomal dominant lethal gene
4. Choose the wrongly matched pair.
 a) Portion of DNA coding for an entire polypeptide is - Cistron
 b) The cluster genes with related function are called - Operon
 c) Genes of bacteria and virus coding for more than one polypeptide is known as - monocistronic gene
 d) The largest known human gene is - Dystrophin
5. Age of Angiosperms is period.
 a) Tertiary b) Quaternary c) Cretaceous d) Jurassic
6. Match and find the correct answer.
- | | |
|--------------------|--------------------------------------|
| 1) Mumps | A) Joint swelling |
| 2) Viral Hepatitis | B) Enlargement of the parotid glands |
| 3) Chicken pox | C) Jaundice |
| 4) Chikungunya | D) Rash and blisters |
- a) 1 - A 2 - D 3 - C 4 - B b) 1 - C 2 - B 3 - A 4 - D
 c) 1 - B 2 - C 3 - D 4 - A d) 1 - D 2 - A 3 - B 4 - C

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7. The purpose of biological treatment of waste water is to
- a) Reduce BOD
 - b) Increase BOD
 - c) Reduce sedimentation
 - d) Increase sedimentation
8. Choose the incorrect statement.
- a) Identify and protect all threatened species
 - b) Air, water and soil should be conserved
 - c) Identify and protect artificial habitats for feeding & breeding of species
 - d) Wild Life Protections Act should not be implemented

Section - B

4x2=8

Note : Answer any four of the following questions.

9. Sponges have more power of regeneration. Give reason.
10. What is amniocentesis? Why a statutory ban is imposed on this technique?
11. What is the function of the H₁ histone?
12. What is Bursa of fabricius?
13. Write the potential applications of human stem cells.
14. What is SMOG and how it is harmful for us?

Section - C

3x3=9

Note: Answer any three questions. Q.No. 19 is compulsory.

15. Suggest the role of Oxytocin in child birth.
16. Do all the female honey bees become the queens? If not why?
17. What are the 3 ways of the struggle for existence?
18. What is Bioremediation? What are its two types?
19. Based on the seasonal distribution of rainfall classify the types of tropical forests.
20. How does recycling help to reduce pollution?

Section - D

2x5=10

Note : Answer the following questions.

21. a) Write an essay on multiple fission.
- (OR)
- b) Explain the process of DNA replication.
22. a) What are transgenesis? Explain the steps involved in production of transgenic organisms.
- (OR)
- b) Explain the three types of extinction.

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