

**BIOLOGY
MODEL TEST**

STANDARD: XII

MARKS: 70

TIME: 2 ½ hrs

**Bio-Botany
PART – A**

(35 marks)

Section – I

(8×1=8)

NOTE: (i) Answer all the questions.

(ii) Choose and write the correct answer.

- | | | |
|--|--|------------|
| 1. Formation of ATP during glycolysis is called | a) Solanum | b) Ricinus |
| a) Dephosphorylation | c) Hibiscus | d) Musa |
| b) Photo phosphorylation | | |
| c) Termial Oxidation | | |
| d) Substrate level phosphorylation | | |
| 2. The respiratory quotient of an anerobes when it release 4Co ₂ molecules from one glucose molecule is | 6. Match it correctly | |
| a) Infinity | A) Helianthus - 1) Macro scleride | |
| b) Zero | B) Canna - 2) Osteo Scleride | |
| c) 1 | C) Pisum - 3) Lemellar Collenchyma | |
| d) 1.33 | D) Crotalaria - 4) Stellate Parenchyma | |
| 3. Watson and Crick proposed double helix model of DNA based on the research of | a) A-1, B-3, C-4, D-2 | |
| a) Fredrick gripith | b) A-4, B-3, C-1, D-2 | |
| b) Wilkinson and Franklin | c) A-3, B-4, C-1, D-2 | |
| c) Messelson and Stahl | d) A-3, B-2, C-1, D-4 | |
| d) Batson and punnet | 7. Find out the wrong statement | |
| 4. The bio medicine used for the treatment of heart disease | a) All bacteria produce at least one type of restriction enzymes | |
| a) Morphine | b) Restriction enzymes cleave DNA at any places along its length | |
| b) Quinine | c) Restriction enzymes and ligase do not care about the source of DNA | |
| c) Digoxin | d) Restriction endonucleases discovered in 1970 | |
| d) Ginseng | 8. According to carolus linnaeus which two families are brought together in a single group | |
| 5. The flowers are bisexual, zygomorphic and Epigynous in | a) podostemaceae and laurineae | |
| | b) Caryophyllaceae and orchidaceae | |
| | c) Anacardiaceae and gingiferaceae | |
| | d) Asteraceae and orchidaceae | |

Section – II

(4×2=8)

NOTE: Answer any four questions.

- How endodermis of Dicot stem is differ from endodermis of Dicot root?
- When chrysanthemum plant is exposed to more than critical periods of light fails to flower? Why?
- What is monocarpic parrenial? Give an example?
- What is PHB? Which plant produces PHB?
- What is Biopiracy?
- Why has 'one gene one enzyme hypothesis' been modified into 'one gene one polypeptide hypothesis'?

Section – III

(3×3=9)

Note: Answer any three questions. Question number 16 is compulsory.

- Define biosystematics? Write any two aims of biosystematics?
- Draw and label the parts of Transfer Ribo nucleic acid?
- Differentiate sieve tube with sieve cell?
- What is sigmoid growth curve? Draw diagram?
- What is superbug? Who developed this and write the role of superbug?

Section – IV

(2×5=10)

Note: Answer all the questions

20. Write the salient features of International code of Botanical nomenclature?

(or)

Explain the electron transport chain and energy yield of respiration?

21. Draw the structure of T.S of dicot leaf and explain the structure of mesophyll only?

(or)

What is biopesticide? Explain the role of Bt-gene?

PART – B
Bio-Zoology

(35 marks)

Section - I

NOTE: (i) Answer all the questions.

(ii) Choose and write the correct answer. **(8×1=8)**

1. Match it correctly

- A) Genetic drift – 1. August Weismann
B) Struggle for existence – 2. Sewall Wright
C) Learning is acquired characters – 3. Darwin
D) Germplasm theory – 4. Mac Dougall

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

2. The part of nervous system responsible for sleep wake cycle is

- a) Cerebrum b) Thalamus
c) Hypothalamus d) Pons

3. Find out the wrong statement

- a) The normal blood glucose level during fasting is 70 to 110mg/dl
b) The calorie requirement for IRM at heavy work during occupational activities is 1800 calories
c) The surface area of skin in our body is 1.1-2.2 m²
d) The volume of water found in the glomerular filtrate is 170 litre

4. Kala azar is caused by

- a) Trypanosoma Gambians
b) Leishmania tropica
c) Leishmania donovani
d) Giardia intestinalis

5. Assertion: Macrophages are large irregular-shaped cells that engulf microbes
Reason: Macrophages are provided with enzymes and free radicals

- a) Assertion and Reason both are correct but reason is not correct explanation
b) Assertion and Reason are correct and reason is the correct explanation
c) Assertion is right and Reason is false
d) Both Assertion and Reason are false

6. Depression, hallucination and delusions are the symptoms of

- a) Alzheimers diseases
b) Thallasemia
c) Agammaglobulinemia
d) Huntingtons chorea

7. Which is the better method to dispose large amount of water carrying relatively small amounts of chemical water?

- a) Land filling method
b) Deep well direction
c) Surface impoundments
d) incineration

8. Which of the following is not an exotic breed?

- a) Jersey b) Gir
c) Brown Swiss d) Ayreshire

Section – II

(4×2=8)

NOTE: Answer any four questions.

9. Draw and label the parts of Cs of cochlea?

10. Intake of less protein in the diet causes two types of diseases? What are they? Mention one symptom for each?

11. Transfer of immune products develop what type of immunity? Differentiate active and passive immunity?

12. What is meant by 'Survival of the fittest'?

13. How will you identify a healthy cattle?

14. Mention two uses of Karyotypes?

Section – III

(3×3=9)

Note: Answer any three questions. Question number 18 is compulsory.

15. What is speciation? Explain the types?

16. Explain the urea biosynthesis in the liver?

17. What is chemotherapeutic agent? Write two characters of good chemotherapeutic agent?

18. List three differences between cell mediated immunity and Antibody mediated immunity?

19. Write two important of urine analysis and mention two quantitative methods used for testing sugar?

Section – IV

(2×5=10)

Note: Answer all the questions

20. Write the various measures to eradicate poverty in human society?

(or)

Explain Genethrapy methods employed for treating the inherited diseases?

21. How does a muscle shorten during its contraction and returns to its original form during relaxation explain?

(or)

Describe the events in Cardiac cycle?