

BIOLOGY - 2013

Time : 3 Hours |

Class : 12th

| M.M. : 75

Instructions-

- (i) All questions are compulsory.
- (ii) Read the instructions of question paper carefully and write their answers.
- (iii) There are two Sections- 'Section-A' and 'Section-B' in the question paper.
- (iv) In 'Section A', Question Nos. 1 to 4 are objective types which contain Fill in the blanks, One word answer, Match the pairs and Choose the correct answers. Each question is allotted 5 marks.
- (v) Internal options are given in Q. Nos. 5 to 16 in 'Section B'.
- (vi) Q. Nos. 5 to 11 carry 4 marks each.
- (vii) Q. Nos. 12 to 14 carry 5 marks each.
- (viii) Q. Nos. 15 and 16 carry 6 marks each.
- (ix) Draw neat and labelled diagrams wherever necessary.

(Section-A)

(Objective Type Questions)

Q. 1. Write the correct answer from the given options:

- (A) Guttation occurs by:
 - (i) Stomata
 - (ii) Lenticels
 - (iii) Hydathodes
 - (iv) Wounds
- (B) Hydroponics is:
 - (i) Soilless farming
 - (ii) To grow plants in water
 - (iii) To grow aquatic plants
 - (iv) To grow floating hydrophytes
- (C) Photosynthesis is a/an:
 - (i) Reduction reaction
 - (ii) Oxidation reaction
 - (iii) Oxidation-reduction reaction
 - (iv) None of the above
- (D) The currency of energy of cell is:
 - (i) DNA
 - (ii) RNA
 - (iii) ATP
 - (iv) Salts

(E): The two components of an ecosystem are:

- | | |
|-------------------------|-------------------------|
| (i) Organism and plants | (i i) Weeds and trees |
| (iii) Frog and man | (iv) Biotic and abiotic |

Q.2. Match the correct pairs:

'A'

'B'

- | | |
|-----------------|---------------------------|
| (1) Scurvy | (i) Apical dominance |
| (2) Haemoglobin | (ii) Seed |
| (3) Nephron | (iii) Vitamin C |
| (4) Ovule | (iv) Red blood corpuscles |
| (5) Auxin | (v) Kidney |

Q.3. Fill in the blanks:

- (i) The agriculture done in freshwater is called.....
- (ii) In forest trees basically function as.....
- (iii) The substances which produce pollution are called.....
- (iv) The pyramid of is always upright.
- (v) Strong, loud, unpleasant or intolerable sound is called.....

Q.4. Write each answer in one word:

- (i) Which organism is used in vermicompost formation?
- (ii) Write the botanical name of coconut.
- (iii) Give an example of immune deficiency.
- (iv) After which age does no growth occur in girls?
- (v) Who is the greatest enemy of nature and organism?

(Section - B)

(Very Short Answer Type Questions)

Q.5. Draw a labelled diagram of Ruminant stomach. (Or)

Draw well labelled diagram of L.S. of human kidney.

Q.6. Write four difference between artery and vein. (Or)

Write four differences between tendon and ligament.

Q.7. Describe the reflex arc with labelled diagram only. (Or)

What is Joint? Explain ball and socket joint along with diagram.

Q.8. What is double fertilization? Give its significance. (Or)

What is cross-pollination? Write advantages and disadvantages of cross-pollination.

Q.9. What is spermatogenesis? Explain with the help of diagram. (Or)

What is Oogenesis? Explain with the help of diagram only.

- Q. 10. What is humus? **Distinguish between Mor and Mull humus.** (Or)
Write any four **physiological adaptations** found in aquatic plants.
- Q. 11. What do you mean by **Human population**? Write the names of the factors affecting it. (Or)
Why is **pyramid of energy** never inverted in any ecosystem?
- Q. 12. Explain the **osmotic theory of opening and closing of stomata.** (Or)
How will you prove that the water is the source of O_2 released during photosynthesis?
- Q. 13. Define digestion. **Explain the process of digestion in buccal cavity.** (Or)
What do you understand by **ammonotelic, ureotelic and uricotelic animals**? Give example of each.
- Q. 14. Define **population growth** and write the problems created due to population growth. (Or)
What are antibiotics? **How does antibiotic resistance develop in bacteria?**
- Q. 15. Describe about any **two biofuel** producing plants. (Or)
What is AIDS? **Describe along with symptoms and measures of control.**
- Q. 16. Describe various stages of '**Glycolysis**' with the help of diagram only. (Or)
Define respiration. **Write difference between aerobic and anaerobic respiration.**