

## 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: <http://www.mpboardonline.com>

- (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.

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