

BIOLOGY – 2012

Time : 3 Hours]

Class : 12th

[M.M.:75

Instructions -

- (i) All questions are compulsory.
- (ii) There are two Sections, 'Section-A' and 'Section-B' in the question paper.
- (iii) In Section A, Question Nos. 1 to 4 are objective types.
- (iv) In Section B, internal options are given from Questions Nos. 5 to 16.
- (v) Draw neat and labelled diagrams wherever necessary.

Section-A

Q.1. Fill in the blanks :

- (i) is chief component of chlorophyll.
- (ii) Cuscuta is a parasite plant.
- (iii) Glycolysis process completes in
- (iv) The loss of water in the form of droplets from the margins of leaves is called
- (v) There are chambers in the heart of cockroach.

Q.2. Choose the correct option :

- (A) Tendons Join :
(1) Muscles with muscle (2) bones with bones
(3) Muscles with bone (4) muscles with nerve
- (B) Number of cervical vertebrae in human beings is :
(1) 7 (2) 9
(3) 12 (4) 6
- (C) The process of double fertilization (triple fusion) was discovered by :
(1) Nawaschin (2) Leeuwenhoek
(3) Strasburger (4) Hafmeister
- (D) Sertoli cells are found in :
(1) Kidney (2) Ovary
(3) Liver (4) Testis
- (E) In forest ecosystem, the pyramid of energy is :
(1) Always inverted (2) Always upright.
(3) First upright then inverted (4) None of the above.

Q.3. Match the following :

'A'

(a) Rhizophora

(b) Hydrilla

(c) Lac

(d) Pearl

(e) Opuntia

'B'

(1) Laccifer

(2) Mangrove plant

(3) Pinctada vulgaris

(iv) Phylloclade

(v) Rooted submerged plant

(vi) Apis Dorsata

Q.4. Write answer in one word/sentence :

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(1) When is World Environment Day celebrated?

(2) Write the name of the genetically engineered human Insulin.

(3) Write full name of H.I.V.

(4) What is called the statistical study of human population?

(5) Write the name of harmful chemical substance of tobacco.

Section-B

Q.5. Write names and functions of enzymes present in gastric juice of human. 4

(Or) Write any four differences between S.A. Node and A.V. Node.

Q.6. Write the role of liver in excretion.

(Or) Write the name of four respiratory disorders with symptoms.

Q.7. Draw a labelled diagram of T.S. of spinal cord and write its one important function. 4

(Or) Draw a labelled diagram of L.S. of human teeth.

Q.8. What is double fertilization? Write its significance. 4

(Or) Write four differences between spermatogenesis and oogenesis.

Q.9. Explain two physiological effects of Auxin. 4

(Or) What is ageing? Write three important symptoms in human body.

Q.10. Write the botanical name and two medicinal value of Safed Musli and Amla.

(Or) What is greenhouse effect? Write its two control measures.

Q.11. Write any four physiological adaptations found in aquatic plants. 4

(Or) What is bio-diversity? Write three efforts for conservation of bio-diversity.

- Q. 12. Explain the process of Glycolysis only by linear diagram. 5
(Or) Write one deficiency symptom of the following mineral elements in plants :
(i) Nitrogen (ii) Molybdenum
(iii) Phosphorus (iv) Zinc
(v) Magnesium.
- Q. 13. Draw a labelled diagram of V.S. of human eye and write one function of Rod and Cone.
(Or) Which of the gland controls the activity of thyroid gland? Write four effects of hypothyroidism on human body.
- Q. 14. Define population explosion. Write any four important methods of population control.
(Or) Write five reasons of drug addiction in youths.
- Q. 15. Explain the mechanism of opening and closing of stomata in leaves. 6
(Or) Write any six differences between cyclic photophosphorylation and non-cyclic photophosphorylation.
- Q. 16. What is cancer? Explain any four type of cancer in brief. 6
(Or) Write short notes on the following :
(A) Biopyracy (B) Biopotential.