
ICSE SEMESTER I EXAMINATION – ANSWER KEY

BIOLOGY (SCIENCE PAPER 3)

Question 1.

- (i) (b) Photophosphorylation. [1]
- (ii) (c) Lenticels. [1]
- (iii) (a) Root pressure. [1]
- (iv) (d) Recessive. [1]
- (v) (a) 44 + XX chromosomes. [1]

Question 2.

- (i) (d) Telophase. [1]
- (ii) (c) rr [1]
- (iii) (b) Hypertonic. [1]
- (iv) (a) Thymine. [1]
- (v) (c) Genes. [1]

Question 3.

- (i) (b) Nicotinamide Adenine Dinucleotide Phosphate. [1]
- (ii) (a) Creates a suction force for absorption of water from the soil. [1]
- (iii) (d) 3 : 1 [1]
- (iv) (a) Xylem [1]
- (v) (c) S – phase. [1]

Question 4.

- (i) (a) It is the division of nucleus during cell division. [1]
- (ii) (b) Out of a pair of contrasting alleles present together, only the dominant allele is able to express itself while the recessive remains suppressed. [1]
- (iii) (a) It is a sudden change in one or more genes in an organism's cells which is heritable. [1]
- (iv) (d) It is the synthesis of glucose from carbon dioxide and water by green plants using light energy. [1]
- (v) (c) It is the loss of water in the form of water vapour from the aerial parts of the plant. [1]

Question 5.

- (i) (b) Around the centrioles in animal cells. [1]
- (ii) (d) Around the stoma. [1]
- (iii) (a) Conducts water and minerals in leaves. [1]
- (iv) (c) Found only in animal cells. [1]
- (v) (c) Present on chromosomes. [1]

Question 6.

- (i) (c) Gives rigidity and shape to plant cells. [1]
- (ii) (a) It is the point of attachment of two sister chromatids. [1]
- (iii) (b) Reduces transpiration. [1]
- (iv) (d) Guttation. [1]
- (v) (a) Site of Light Independent Phase. [1]

Question 7.

- (i) (d) To show that carbon dioxide is necessary for Photosynthesis. [1]
- (ii) (b) Air inside the flask is free of carbon dioxide. [1]
- (iii) (a) Sodium hydroxide. [1]
- (iv) (a) Leaf 1 turns brown, Leaf 2 turns blue black. [1]
- (v) (c) The plant should be placed in dark for 24 hours to destarch the leaves. [1]

Question 8.

- (i) (a) To prove that more transpiration occurs from the lower surface of a dicot leaf. [1]
- (ii) (b) Blue [1]
- (iii) (c) Upper surface – less pink, lower surface – more pink. [1]
- (iv) (d) Narrow leaves, Fewer stomata. [1]
- (v) (a) High humidity in the air and low temperature. [1]