

## Biology Model Question Paper - 6

**Question 1 :** A plant cell becomes turgid due to

- (A) Plasmolysis
- (B) Exosmosis
- (C) Endosmosis
- (D) Electrolysis

Answer: (C)

**Question 2 :** A person is suffering from frequent episodes of nasal discharge nasal congestion, reddening of eyes and watery eyes. These are the symptoms of

- (A) Bronchitis
- (B) Rhinitis
- (C) Bronchial carcinoma
- (D) Cyanosis

Answer: (D)

**Question 3 :** A man is admitted to a hospital. He is suffering from an abnormally low body temperature, loss of appetite and extreme thirst. His brain scan would probably show a tumor in

- (A) Pons
- (B) Cerebellum
- (C) Hypothalamus
- (D) Medulla Oblongata

Answer: (C)

**Question 4 :** A RBC and a plant cell (with thick cell wall) are placed in distilled water. The solute concentration is the same in both the cells. What changes would be observed in them?

- (A) The RBC would increase in size and burst while the plant cell would remain about the same size.
- (B) The plant cell would increase in size and burst while the RBC would remain about the same size.
- (C) Both plant cell and RBC would decrease in size and collapse.
- (D) Both plant cell and RBC would not undergo any change.

Answer: (C)

**Question 5 :** In which stage of the first meiotic division two sister chromatids are formed?

- (A) Leptotene
- (B) Zygotene
- (C) Pachytene
- (D) Diplotene

Answer: (A)

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**Question 6 :** In the absence of enterokinase, the digestion of \_\_\_\_\_ would be affected in our intestine.

- (A) Amino acid
- (B) Albumin
- (C) Starch
- (D) Maltose

Answer: (A)

**Question 7 :** In the absence of acrosome, the sperm \_\_\_\_\_.

- (A) cannot get energy
- (B) cannot penetrate the egg
- (C) cannot swim
- (D) cannot get food

Answer: (D)

**Question 8 :** In genetic fingerprinting, the 'probe' refers to \_\_\_\_\_.

- (A) a radioactively labelled single stranded RNA molecule.
- (B) a radioactively labelled single stranded DNA molecule.
- (C) a radioactively labelled double stranded DNA molecule.
- (D) a radioactively labelled double stranded RNA molecule.

Answer: (A)

**Question 9 :** In genetic code, 61 codons code for 20 different types of amino acids. This is called

- (A) Colinearity
- (B) Commaless
- (C) Degeneracy
- (D) Nonambiguity

Answer: (D)

**Question 10 :** In crop improvement programmes, virus-free clones can be obtained through

- (A) Hybridization
- (B) Embryo culture
- (C) Shoot apex culture
- (D) Grafting

Answer: (B)

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**Question 11 :** In C<sub>4</sub> pathway, the CO<sub>2</sub> fixation in mesophyll cells is carried out by the enzyme \_\_\_\_\_.

- (A) Rubisco
- (B) PEP carboxylase
- (C) Pyruvate decarboxylase
- (D) Pyruvate dehydrogenase

Answer: (D)

**Question 12 :** In an experiment demonstrating the evolution of oxygen in Hydrilla, Sodium bicarbonate is added to water in the experimental set-up. What would happen if all other conditions are favourable?

- (A) Amount of oxygen evolved increases as the availability of carbon dioxide increases.
- (B) Amount of oxygen evolved decreases as the availability of carbon dioxide increases.
- (C) Amount of oxygen evolved increases as carbon dioxide in Water is absorbed by sodium bicarbonate.
- (D) Amount of oxygen evolved decreases as carbon dioxide in water is absorbed by sodium bicarbonate.

Answer: (B)

**Question 13 :** In a typical Mendelian cross which is a dihybrid cross, one parent is homozygous for both dominant traits and another parent is homozygous for both recessive traits. In the f<sub>2</sub> generation, both parental combinations and recombinations appear. The phenotypic ratio of parental combinations to recombinations is \_\_\_\_\_.

- (A) 10 : 6
- (B) 12 : 4
- (C) 9 : 7
- (D) 15 : 1

Answer: (A)

**Question 14 :** In a typical heart, if EDV is 120 ml of blood and ESV is 50 ml of blood, the stroke volume (SV) is

- (A)  $120 - 50 = 70$  ml
- (B)  $120 + 50 = 170$  ml
- (C)  $120 \times 50 = 6000$  ml
- (D)  $120 \div 50 = 2.4$  ml

Answer: (A)

**Question 15 :** In a tissue culture media, the resource of the phytohormone is

- (A) Agar agar
- (B) Glucose
- (C) Micronutrients
- (D) Coconut milk

Answer: (A)

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