

Biology Model Question Paper - 12

Question 1 : In 24 hours, total glomerular filtrate formed in human kidney is

- (A) 1.7 litres
- (B) 7 litres
- (C) 17 litres
- (D) 170 litres

Answer: (D)

Question 2 : If a cross between two individuals produces offsprings with 50% dominant character (A) and 50% recessive character (a) the genotype of parents are

- (A) Aa × Aa
- (B) Aa × aa
- (C) AA × aa
- (D) AA × Aa

Answer: (B)

Question 3 : Identify the incorrect statement with respect to Calvin cycle.

- (A) The first stable intermediate compound formed is phosphoglycerate.
- (B) 18 molecules of ATP are synthesised during carbon fixation.
- (C) NADPH + H⁺ produced in light reaction is used to reduce diphosphoglycerate.
- (D) The carboxylation of RuBP is catalysed by rubisco.

Answer: (B)

Question 4 : Identify the group which includes animals all of which give birth to young ones directly.

- (A) Platypus, Penguin, Bat, Hippopotamus
- (B) Shrew, Bat, Kiwi, Cat
- (C) Lion, Whale, Ostrich, Bat
- (D) Dolphin, Kangaroo, Bat, Cat

Answer: (D)

Question 5 : How many pairs of contrasting characters in pea pod were chosen by Mendel?

- (A) 7
- (B) 5
- (C) 3
- (D) 9

Answer: (C)

Question 6 : How do you differentiate a frog from a toad?

- (A) Frog has no exoskeleton but toad has scales
- (B) Frog respire through lungs but toad respire through skin
- (C) Frog has a tail but toad has no tail
- (D) Frog has no parotid glands but toad has a pair of parotid glands

Answer: (D)

Question 7 : How do you differentiate a butterfly from a moth?

- (A) Moth has one pair of wings but butterfly has two pairs of wings.
- (B) Moth has feathery antennae but butterfly has club shaped antennae.
- (C) Moth has simple eyes but butterfly has compound eyes.
- (D) Moth is diurnal but butterfly is nocturnal.

Answer: (B)

Question 8 : Glucose and amino acids are reabsorbed in the

- (A) proximal tubule
- (B) distal tubule
- (C) collecting duct
- (D) loop of Henle

Answer: (A)

Question 9 : Gastrula has a pore which is known as _____.

- (A) Gonophore
- (B) Blastopore
- (C) Oospore
- (D) Zoospore

Answer: (B)

Question 10 : Gametophyte is the dominant phase in the lifecycle of _____.

- (A) Hibiscus
- (B) Nephrolepis
- (C) Cycas
- (D) Riccia

Answer: (D)

Question 11 : Four children belonging to the same parents have the following blood groups A, B, AB and O. Hence, the genotypes of the two parents are _____.

- (A) Both parents are homozygous for 'A' group
- (B) One parent is homozygous for 'A' and another parent is homozygous for 'B'
- (C) One parent is heterozygous for 'A' and another parent is heterozygous for 'B'
- (D) Both parents are homozygous for 'B' group

Answer: (C)

Question 12 : According to Darwin, evolution is _____.

- (A) a slow, gradual and continuous process.
- (B) a sudden but discontinuous process.
- (C) a slow and discontinuous process.
- (D) a slow, sudden and discontinuous process.

Answer: (A)

Question 13 : According to Boyle's law, the product of pressure and volume is a constant. Hence,

- (A) if volume of lungs is increased, the pressure also increases proportionately.
- (B) if volume of lungs is increased, the pressure decreases proportionately.
- (C) if volume of lungs is increased, the pressure remains the same.
- (D) if volume of lungs is increased, the pressure decreases disproportionately.

Answer: (B)

Question 14 : A true breeding plant producing red flowers is crossed with a pure plant producing white flowers. Allele for red colour of flower is dominant. After selfing the plants of first filial generation, the proportion of plants producing white flowers in the progeny would be

- (A) $1/4$
- (B) $1/3$
- (C) $1/2$
- (D) $3/4$

Answer: (A)

Question 15 : Identify the correct statement :

- (A) The age of the plant can be determined by its height.
- (B) Healing of damaged tissue is because of the activity of sclerenchyma cells.
- (C) Grafting is difficult in monocot plants as they have scattered vascular bundles.
- (D) Because of marked climatic variations, plants growing near the sea shore do not produce annual rings.

Answer: (C)

