



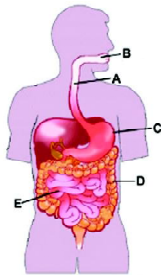
Global Science Olympiad

CLASS 10th SYLLABUS & SAMPLE QUESTIONS

Light, Human Eyes, Electricity, Magnetic effect of electric current, Sources of Energy, Chemical Reactions, Acid Base and Salt, Metals and Non-metals, Carbon and its Compound, Periodic Classifications, Life Process, Control and coordination, Reproduction, Heredity and Evolution, Our Environment, General and applied science.

The Actual Question Paper Contains 70 Questions. The Duration of the Test Paper is 60 Minutes.

1. Digestive system is one of the important systems in human body. The following figure shows the digestive system with important parts of alimentary canal marked as A, B, C, D, and E:



Select the part of alimentary canal in which the following reactions take place:

Starch \longrightarrow Maltose Pancreatic Amylase

Proteins \longrightarrow Peptides Trypsin

Fats \longrightarrow Fatty acids + glycerol Lipase

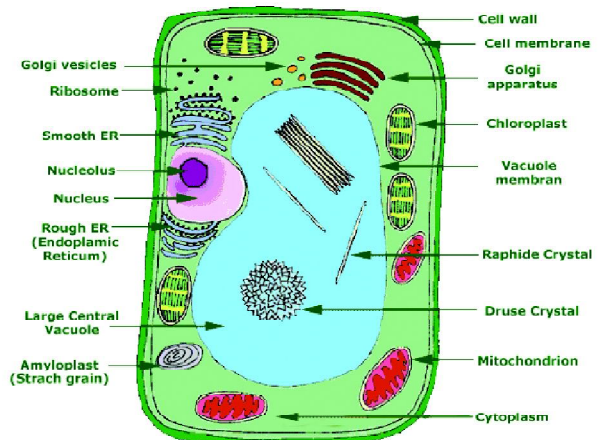
- (A) A (B) B
(C) C (D) D
(E) E

2. Steve has four balls: A, B, C, and D. The mass of ball A is 20 kg, the mass of ball B is 35 kg, the mass of ball C is 40 kg, and the mass of ball D is 60 kg. Steve hits the ball by a stick one by one. Which ball requires more force to push 10 meters?

- (A) Ball A (B) Ball B
(C) Ball C (D) Ball D

- (E) None of these

3. Which one of the following statements is most probably correct about the following cell?



- (A) It is a cell of an elephant because it has cell wall.
(B) It is a cell of fungi because it has cell wall.
(C) It is a cell of a human being because it has ribosome.
(D) It is a cell of a mango tree because it has rough endoplasmic reticulum.
(E) None of these



4. The table given below shows four chemical reactions:

| Sl. No. | Chemical Reaction |
|---------|--|
| 1. | $2Al + 3H_2O \longrightarrow Al_2O_3 + 3H_2$ |
| 2. | $Fe + 4H_2O \longrightarrow Fe_3O_4 + 4H_2$ |
| 3. | $Fe + HCl \longrightarrow FeCl_2 + H_2$ |
| 4. | $Mg + 2HCl \longrightarrow MgCl_2 + H_2$ |

Which of the preceding chemical reactions satisfy the law of conservation of mass?

- (A) Equation 1 and 2
- (B) Equation 1 and 4
- (C) Equation 3 and 4
- (D) Equation 2 and 4
- (E) None of these

5. Three experiments are performed in a laboratory.

Experiment I: A magnet is heated over a burner till it loses its magnetism.

Experiment II: Calcium carbonate or limestone is heated, as a result of which it decomposes into calcium oxide and carbon dioxide

Experiment III: Sand and sugar is mixed in water. This mixture is then passed through a filter paper to separate sand and sugar solution.

Which of the preceding experiments involves alteration of chemical property?

- (A) Experiment I, II, and III
- (B) Experiment I
- (C) Experiment II
- (D) Experiment I and II
- (E) None of these

6. **Statement A:** The angle of refraction is always equal to the angle of incidence

Statement B: Refraction of light is due to

the change in the speed of light while entering from one medium to another.

Which one of the following options is correct for the above given statements?

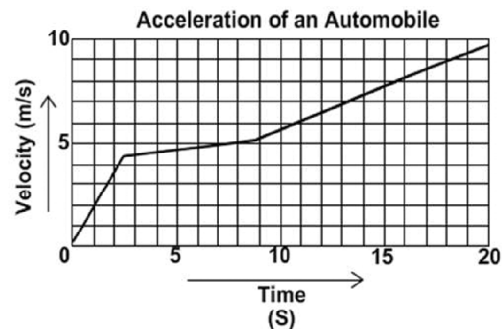
- (A) Statement A is correct
- (B) Statement B is correct
- (C) Both statement A and B are correct
- (D) Both statement A and B are incorrect
- (E) None of these

7. Steve is suffering from myopia. His far point in front of the eye is 80cm. Eye specialist suggests him for concave lens

What will be the power of his lens?

- (A) +1.25 dioptres (B) + 1.05 dioptres
- (C) -1.25 dioptres (D) -1.05 dioptres
- (E) None of these

8. According to the following graph, what was the automobile's acceleration between 10 and 15 seconds?



- (A) 0.40m/s^2
- (B) 0.08 m/s^2
- (C) 4 m/s^2
- (D) 2.76 m/s^2
- (A) None of these

9. Which one of the following parts of human heart receives oxygenated blood from the lungs through pulmonary vein and pushes it into the left ventricle?

- (A) Right ventricle (B) Right atrium
- (C) Left atrium (D) All of these



10. There is a device in the motor which is used to reverse the direction of current in the coil of a motor. What is the name of this device?

- (A) Commutator
- (B) Magnetic field
- (C) Armature
- (D) All of these
- (E) None of these

11. The genetic make-up of the father is $xxYy$ and the genetic make-up of the mother is $XxYY$. Which of the following X trait and Y trait genetic combinations for a child are not possible?

- (A) xX (B) XX
- (C) yy (D) Both B and C
- (E) None of these

12. Which one of the following statements correctly describes the buoyant force?

- (A) The buoyant force is the downward force that a fluid exerts on fluid when it displaces the fluid.
- (B) The buoyant force is the upward force that a fluid exerts on an object in the fluid.
- (C) The buoyant force is the upward force that a fluid exerts on fluid when it displaces the fluid.
- (D) The buoyant force is the downward force that a fluid exerts on an object in the fluid.
- (E) None of these

13. The sun is visible to us about two minutes before the actual sunrise and two minutes after the actual sunset. Which one of the following is responsible for the same?

- (A) Reflection of light
- (B) Refraction of light
- (C) Atmospheric refraction
- (D) All of these
- (E) None of these

14. At a certain place the electrical appliances are connected in a series. The overall resistance of the circuit increases too much. What will be its impact?

- (A) The current from the power supply is low
- (B) The current from the power supply is high
- (C) The current from the power supply is normal
- (D) All of these
- (E) None of these

15. What happens during the short circuit?

- (A) The current in the circuit varies continuously
- (B) The current in the circuit decreases heavily
- (C) The current in the circuit increases heavily
- (D) All of these
- (E) None of these



| ANSWERS | | | | | | | | | | | | | | | |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|
| 1. | (E) | 2. | (D) | 3. | (D) | 4. | (B) | 5. | (C) | 6. | (B) | 7. | (C) | 8. | (A) |
| 9. | (C) | 10. | (A) | 11. | (D) | 12. | (B) | 13. | (C) | 14. | (A) | 15. | (C) | | |