

## K12 ASPIRE

The Center of Learning Excellence

No 10A, 2<sup>nd</sup> Floor, Thiruvalluvar Nagar  
1<sup>st</sup> Main Road, Thiruvanmiyur, Chennai 600041  
9962006587 / 88

## CLASS X CBSE SCIENCE TEST SERIES PAPER 1

Topics Covered

Carbon and its compounds

Life processes

Our environment

How do organisms reproduce

### Very short answer type questions ( 1 mark each )

1. What happens when vegetable oil is heated with sodium hydroxide solution ?
2. Draw the structure of : a) Cyclohexane , b)benzene
3. Organisms create exact copies of themselves in asexual reproduction. Comment.
4. Where is pyruvic acid converted into lactic acid during deficiency of oxygen in tissues of human beings ?
5. Which gland is exocrine as well as endocrine in man?

### Short answer type I questions ( 2 marks each)

6. Why is the rate of breathing in aquatic organisms much faster than in terrestrial organisms?
7. State the function of epiglottis.
8. How does biological magnification affect the organisms belonging to different trophic levels particularly the tertiary consumers?

### Short answer type II questions ( 3 marks each )

9. Why does micelle formation take place when soap is added to water ? Will a micelle be formed in other solvents such as ethanol also ?
10. A compound X is formed by the reaction of a carboxylic acid  $C_2H_4O_2$  and an alcohol in the presence of a few drops of  $H_2SO_4$ . The alcohol on oxidation with alkaline  $KMnO_4$  followed by acidification gives the same carboxylic acid as used in this reaction. Give the names and structures of: a) carboxylic acid, b)alcohol and c)the compound X.
11. Trace the path of sperm during ejaculation and mention the gland and their functions associated with the male reproductive system.

**Long answer type questions ( 5 marks each)**

12. a) An element of group 14 has two common allotropes, A and B. A is very hard and is a bad conductor of electricity while B is soft to touch and a good conductor of electricity. Identify the element and its allotropes. Explain reasons for their different properties.

b) How can we distinguish ethanoic acid and an ethanol using their chemical properties. Write any three differences.

13. a) Explain how carbon dioxide and ozone layer of the atmosphere are important to life.

b) How does study of food chain in an area or a habitat help us ? Give an example of four – step food chain operating in a large lake.

14. a) List any two advantages of growing grapes or banana plants through vegetative propagation.

b) List the parts of human male reproductive system which contribute fluid to the semen. State two advantages semen offers to the sperm.

c) Why is it said that 'sexual reproduction promotes diversity of characters in the offsprings'?

15. a) Draw a sectional view of the human heart and label on it : Aorta, Pulmonary arteries, Vena cava, left ventricle.

b) Why is double circulation of blood necessary in human beings ?