

## CBSE SAMPLE PAPER

### CLASS - X SCIENCE & TECHNOLOGY

[Time : 3 hrs.]

[M. M.: 60]

#### General Instructions:-

- (1) The question paper comprises two Sections – A & B. attempt both the Sections.
- (2) All questions are compulsory.
- (3) There is no overall choice. However internal choice has been provided in all the three questions of five marks. Only one option in such questions is to be attempted.
- (4) Questions 1 to 6 in Section A and 17 to 19 in Section B are short questions. These questions carry one mark each.
- (5) Question 7 to 10 in Section A and 20 to 24 in Section B are short answer type questions and carry two marks each.
- (6) Questions 11 to 14 in Section A and 25 to 26 in Section B are short also short answer type questions and carry three marks each.
- (7) Questions 15 to 16 in Section A and Question 27 in Section B are long answer type questions and carry five marks each.

#### SECTION – A

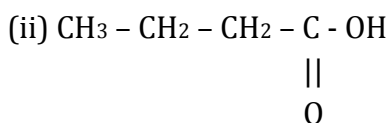
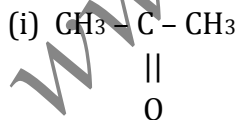
Q1. Which of the following belongs to the same homologous series?

$C_3H_8$ ,  $C_3H_6$ ,  $C_4H_8$ ,  $C_4H_6$

Q2. What would be the colour change when base is added to?

- (1) Litmus
- (2) Phenolphthalein

Q3. Identify the functional groups & name them:



Q4. The refractive index of diamond is 2.42. What is the meaning of this statement in

relation to the speed of light?

Q5. What will happen to the resistance of the circuit, if the current through it is doubled?

Q6. What is meant by the power of accommodation of the eye?

Q7. Give two advantages and two limitations of Mendlieev's periodic table.

Q8. Write the chemical equations when carbon dioxide gas is passed through lime water:

- (i) In small amount
- (ii) In excess

Q9. Draw the ray diagram to show the position, nature and size of image if an object is placed beyond C in concave mirror.

Q10. (a) The power of a lense if is  $-2.5$  D. What is its focal length?

(b) Write two properties of magnetic lines of force.

Q11. (a) How is rainbow formed?

(b) Why do stars twinkle?

Q12. State and explain the Flemings right hand rule with diagram.

Q13. Explain decomposition and displacement reaction with example.

Q14. (a) Give a test to distinguish between butter and cooking oil.

(b) Draw tow isomers of pentane.

Q15. Explain the following:

(a) Why are copper and aluminum wires usually employed for electricity transmission?

(b) Why are sodium and potassium metals kept in Kerosene?

(c) Why copper sulphate solution cannot be kept in iron vessel?

(d) NaCl is an ionic compound. How it is formed?

(e) Hydrogen gas is not evolved when metals reacts with nitric acid?

OR

(a) What is rusting of iron?

(b) Write the conditions necessary for rusting to take place.

(c) Perform an activity to show the conditions needed for iron nail to rust.

(d) Write two ways the prevent rusting of iron.

Q16. (a) How many joules are there in commercial unit of electricity?

(b) Name the two factors on which the resistance of a wire depends.

(c) An electric refrigerator rated 400W operates 8 hours/day. What is the cost of energy to operate it for 30 days at Rs.3.00 per kWh?

OR

(a) Why is series arrangement not used in household circuits?

(b) What is short circuiting?

(c) Show how would you connect three resistors, each of resistance  $6\ \Omega$  so that the combination has a resistance of:

(i)  $9\ \Omega$

(ii)  $4\ \Omega$

SECTION – B

Q17. What is the function of guard cells?

Q18. What is Transpiration?

Q19. How is respiration different from breathing? Give any one difference.

Q20. How did the 'Chipko Andolan' ultimately benefit the local population? Give any two benefits.

Q21. List any four suggestions you would recommend to your friends to make them more environment friendly.

Q22. Write two advantages of classifying energy sources as renewable and non-renewable.

Q23. Write two limitations of nuclear energy.

Q24. Write one feature which is common to each of the following pairs of terms/organs:

(i) Glycogen and starch

(ii) Chlorophyll and hemoglobin

(iii) Gills and lungs

(iv) Arteries and vein

Q25. Define Hormone. Name a hormone which is released to fight fear. What are its effects? (Write any two)

- Q26. (a) What are homologous organs?  
(b) How is sex determined in human beings?

- Q27. (a) Draw the diagram of reproductive system of human female. Label:  
(i) Fallopian tube  
(ii) Uterus  
(iii) Cervix  
(iv) Vagina

- (b) Where does fertilization takes place in human female?  
(c) How does embryo gets nutrition?  
(d) Name two sexually transmitted diseases.

OR

- (a) What is the purpose of making urine?  
(b) Describe the mechanism of urine formation. Draw diagram also.