CBSE Sample Paper
Class: X
Science and Technology

TIME: $2\frac{1}{2}$ *Hrs*. **MAX.**

MARKS: 60

General Instructions:

1. The question paper consists of two **sections A and B.** You are to attempt both the sections and all questions are compulsory.
2. The candidates are advised to attempt all the questions of **section A** separately and **section B** separately.
3. Marks allocated to every question are indicated against it.
4. Question no**. 1- 4 in section A** and **17** and **18 in section B** are to be answered in one word or one sentence.
5. Question no: **5-8 in section A** and **19** and **20 in section B** are to be answered in 30-40 words each.
6. Question no**: 9-14 in section A** and **21- 23 in section B** are to be answered in 40 to 50 words each.
7. Question no: **15 and 16 in section A** and **24 in section B** are to be answered in 70 words each.

SECTION – A

1. Which property of steel makes it enable to be used as household utensils now a days?
2. What is the difference in the type of cooling in annealing and quenching?
3. The current through resistor is made three times its initial value. How many times do the rate of heat produced in the resistor increase?
4. Name two radioactive elements?
5. What is static equilibrium? What are its characteristics?
6. What is geostationary satellite? Write its two applications?
7. What are magnetic lines of forces ? How does it indicate in solenoids?

8. Show graphically the effect of temperature on the rate of reaction for-
    a. Formation of KI
    b. Slow reactions
    c. Enzyme catalyzed reversible reactions

9. Write the formulae for the given compounds and name the functional groups present in each of them:

(i) Butanoic acid (ii) Acetone (iii) Nitroethane

10. How is Iron extracted from its ore?

11. What is composition of cement? Describe briefly its components?

Define resistivity and its unit? Why we prefer to use alloys for heating & in making of ferro-elements?

12. Draw a diagram of nuclear reactor?

13. What is pH value? How you can measure it ? pH value of a given solution changes from 8 to 4. How many times will you expect a change in hydrogen ion concentration?

14. a) What is magnification of lenses? Two thin lenses of power +1.5 D and – 2.0 D are placed in contact. Find the power and focal length of lens combination?

b) An object of 3.0 cm in size is placed 40 cm in front of concave mirror of focal length

10 cm. find the position and nature of image formed.

16. How is sulphur extracted from its ore? What is effect of heat on sulphur? Draw the diagram of its allotropes?

OR

Give the flow diagram of Production of Ammonia? Describe the activity to show the basic nature of solution of ammonia? Give the reaction involved in the Catalytic Oxidation of ammonia.

SECTION- B

17. What is translocation and acent of sap?

18. What do you mean by Triple fusion and Double Fertilization?
19. What is synthetic theory of evolution?
20. How development effects the environment?
21. With the help of diagram explain briefly the excretion system of earthworm?
22. With the help of diagram explain the structure of neuron?
23. Draw a labeled diagram of human heart?
24. What is photosynthesis? What are its two phases? Discuss role of chlorophyll in it?

Or

Explain the Human digestive system with their digestive mechanism