

**SCIENCE AND TECHNOLOGY
CLASS X (THEORY)**

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

MAX. MARKS: 60

General Instruction:

1. The question paper comprises of two sections A and B. You are to attempt both the sections.
2. The candidates are advised to attempt all the questions of Section A separately and section B separately.
3. All questions are compulsory.
4. There is no overall choice. However, internal choice has been provided in two questions of five marks category in Section A and one question of 2 marks category and one question of 3 marks category in section B. You are to attempt only option in such questions.
5. Marks allocated to each question are indicated against it.
6. Questions 1 to 4 in Section A and 17,18 in Section B are very short answer questions. These are to be answered in one word or one sentence only.
7. Questions 5 to 8 in Section A and 19, 20 in Section B are short answer questions. These are to be answered in about 30-40 words each.
8. Questions 9 to 14 in Section A and 21,23 in Section B are also short answer questions. These are to be answered in about 40-50 words each.
9. Questions 15,16 in Section A and 24 in Section B are long answer questions. These are to be answered in about 70 words each.

PART-A

1. What is the major disadvantage of using the pure gold?
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 the metal & non metal found in liquid state?
5. What are amphoteric oxides? Give example of two amphoteric Oxides?
6. What are slow and fast reactions? Give example of each?
7. A silver wire has a diameter 1 mm and resistivity of 3.6×10^{-6} ohm. How much of this wire would be required to make a 20-ohm coil?

8. What are the major functions of ISRO in space research program?
9. What is mirage effect? Draw a simple ray diagram to show this effect?
10. What is cause of corrosion? Name two elements where corrosion is an advantage also explain how it is an advantage? (BY:- VIDHUR, LUDHAIANA, 09915089502)
11. state two disadvantages of following non conventional energy:-
 - a) geothermal energy
 - b) tidal energy
 - c) wind energy
12. a) What is earth wire? What is its function?
b) What is solenoid? Draw a simple sketch to show the magnetic lines of forces through it.
13. Draw a simple diagram to show the polar and equatorial orbits? What kind of satellites are launched through them and why?
14. Write the various reactions evolved in solvay process?
15. What are various defects of vision? Draw ray diagram to show these defects? How these defects are corrected ?

OR

- a) What is radioactivity? Name two radioactive elements?
- b) What is chain reaction?
- c) What are hazards related to nuclear waste?

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.

PART-B

17. What is translocation and ascent of sap?
18. What do you mean by Triple fusion and Double Fertilization?
19. What is synthetic theory of evolution?
20. How does development affect the environment?
21. Explain the structure of DNA?
22. How do the processes of transportation occur in plants?
23. Draw a labeled diagram of human heart?
24. Explain with diagram functions of each part of human cerebrum?

OR

Explain human digestive system