

K12 ASPIRE

The Center of Learning Excellence

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

CLASS X CBSE SCIENCE TEST SERIES PAPER 3

Topics Covered

Metals and non-metals
Electricity
Magnetic effects of electric current
Management of natural resources

Very short answer type questions (1 mark each)

1. Name two metals that do not react with water at all.
2. What is the amount of electric charge that flows through the circuit when a current of 0.5 A is drawn by a filament of an electric bulb for 10 minutes ?
3. Two pieces have been cut from a long wire. The ratio of their length is 2 : 1. What is the ratio of their resistances ?
4. Name a non – metal which is lustrous.
5. Name the prominent ecologist who is responsible for chipko movement.

Short answer type I questions (2 marks each)

6. Why should a fuse with defined rating not be replaced by one with a larger rating?
7. A magnetic compass shows a deflection when placed near a current carrying wire. How will the deflection of the compass get affected if the current in the wire is increased ? Support your answer.
8. Suggest any two measures to reduce the level of carbon dioxide in the atmosphere.

Short answer type II questions (3 marks each)

9. Why is aluminium oxide considered an amphoteric oxide ?
10. Which of the methods given in A is applied for the extraction of metals given in B.
A – Electrolytic reduction, Reduction with carbon
B – Zinc, Aluminium, Sodium, Iron

11. An electric bulb is rated as 50 W, 220 V. Calculate the energy consumed by the bulb in 20 minutes. Express your answer in commercial units of energy.

Long answer type questions (5 marks each)

12. a) Distinguish between renewable and non – renewable sources of energy (3)
b) Choose the renewable sources of energy from the following list : (2)
Coal, biogas, sun, natural gas
13. a) Reactivity of Al decreases if it is dipped in HNO_3 (1.25)
b) Carbon cannot reduce the oxides of Na or Mg (1.25)
c) NaCl is not a conductor of electricity in solid state whereas it does conduct electricity in aqueous solution as well as in molten state (1.25)
d) Metals like Na, K, Ca and Mg are never found in their free state in nature (1.25)
14. Draw an appropriate schematic diagram showing common domestic circuits and discuss the importance of fuse. Why is it that a burnt out fuse should be replaced by another fuse of identical rating? (5)
15. The value of current I flowing in a given resistor for the corresponding values of potential difference V across the resistor are given below : (5)

I (amperes)	0.5	1.0	2.0	3.0	4.0
V(volts)	1.6	3.4	6.7	10.2	13.2

(OR)

Three 250 W heaters are connected in parallel to a 100 V supply. Calculate : (5)

- a) The total current taken from the supply
b) The resistance of each heater
c) The energy supplied in KWhr to the three heater in 5 hours