

MODEL TEST PAPER

SUB: SCIENCE

CLASS: X

SECTION A

- 1) Define dynamic equilibrium. 1
- 2) Who all had proposed "The Liquid Drop Model"? 1
- 3) Define esterification. 1
- 4) State the principle behind the lightening of a matchstick. 1
- 5) "Non-metals cannot displace hydrogen from the acids". Justify your answer. 1
- 6) State the 'Big bang' theory and the 'Steady state' theory. 2
- 7) Define annealing of glass. Why is annealing preferred in the manufacture of glass? 2
- 8) Calculate the energy released in MeV when 120g of a substance is completely converted into energy. ($1\text{MeV} = 1.6 \times 10^{-13} \text{ J}$) 2
(Or)
6.4KJ energy per minute is produced in a nuclear reactor. Find out the number of fissions taking place in it in one hour if the energy per fission is $3.2 \times 10^{-11} \text{ J}$.
- 9) What are the necessary conditions for rusting to take place? 2
- 10) How does a permanent magnet differ from an electromagnet? 2
- 11) Define a) Vulcanisation b) Decarboxylation c) Polymerisation 3
(Or)
What is a monomer? Name the monomer present in
a) Natural rubber b) Synthetic rubber c) Teflon d) Polyethene
- 12) A torch bulb is rated at 2.5V and 500mA. Find it's 3
a) Resistance b) Power
- 13) Define an acid and a base. Name two each of the following :- 3
a) Strong acid b) Weak acid c) Strong base d) Weak base
Give their chemical formulae
- 14) What is electroplating? What are the purposes of electroplating? 3 Name the
electrolyte used for silver plating. 3
- 15) Differentiate a star and a planet. 3
(Or)
a) Mention the main features of the rocket fuels.
b) Name two of each Solid and liquid rocket fuels
- 16) Comment upon the statement "Sulphuric acid is the King of Chemicals". Justify your answer 3
- 17) Write the equation showing the preparation of soap. Define Saponification. Why is the branching in the detergents being minimized? 3
- 18) With the help of a labeled diagram explain the construction and Working of a DC motor. 5
(Or)
Derive the mirror formula.
- 19) Describe the Haber's process for the manufacture of Ammonia. 5
Mention the optimum conditions for the process.

(Or)

With the help of a labeled diagram explain the extraction of iron from its ore with the help of suitable equations.

- 20) Explain the construction and working of a compound microscope with the help of a labelled ray diagram. 5

(Or)

With the help of a labelled diagram explain the construction and working of a nuclear reactor.

SECTION B

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| 21) Define homologous chromosomes | 1 | |
| 22) From which cells are the blood cells manufactured in the bone marrow? | 1 | |
| 23) Mention the role of the parathyroid gland. | 1 | |
| 24) Define eutrophication. How is this phenomenon affecting the fishes? | 2 | |
| 25) Explain the procedure of blood clotting with the help of equations. | 2 | |
| 26) Show the process of sex determination. What are sex chromosomes? | 3 | |
| 27) Draw a well-labelled diagram of a) Nerve net in hydra b) Neuron | 3 | |
| 28) Explain the process of sewage treatment. | 3 | |
| 29) Explain the mechanism of the light phase of photosynthesis. | 3 | |
| 30) Explain the process of fertilization in flowers with the help of a neat and a labelled diagram. | 5 | |