

Sample Paper – 2007
Class – X
Science

Time Allowed: 2 1/2 Hrs
marks: 60

Max

-----General

Instruction _____:

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. A person stands anywhere in front of the mirror and sees his image as (i) erect and diminished (ii) erect and equal to his size. Identify the mirror used in each case. **1**
2. What is meant by rectified Spirit? **1**
3. Explain (i) colour Blindness (ii) Astigmatism. **1**
4. Differentiate between Calcining and Slaking of lime with the help of Chemical Equations. **1**
5. In the reaction, $N_2O_4(g) \rightleftharpoons 2NO_2$, the Concentration of $[N_2O_4]=4.0 \times 10^{-2} \text{ mol L}^{-1}$ at equilibrium constant. **2**
6. What is Electromagnet? What type of core should put inside a current Carrying solenoid to make an electromagnet. State any 2 factors on which the strength of Electromagnet depends. **2**
7. Give the Chemical tests to a) detect the presence of ethanol. b) Show acidic nature of Ethanoic acid. Support your answer with chemical reaction. **2**

OR

How will you show that, a) propanone undergoes oxidation b) Ethanoic Acid Undergoes Decarboxylic acid.

8. What is a wind energy farm? Why is it essential to locate Wind energy forms at Specific location? List 2 advantages in harnessing wind energy. **2**
9. A 100 watt electric bulb is lighted for 2 Hrs daily, and four 40 watts bulbs are lighted for 4 hours everyday. Calculate the energy consumed (in kWh) in 30 days. **3**
10. Explain how the following metals are obtained from their compounds by the reduction process. **3**
- Metal 'X' which is low in reactivity series.
 - Metal 'Y' which is in the middle of the series.
 - Metal 'Z' which is high up in the reactivity Series.

OR

Explain the preparation of Ethanoic Acid by fermentation process and Hydration of Ethene.

11. a) Explain why only part of the solar energy that strikes the upper regions of Atmosphere, reaches the surface of the earth.
b) With the help of a diagram, explain the construction and working of a Solar water heater. **3**
12. Describe the Hasenclever Plant for manufacture of Bleaching powder with the help of a labeled diagram. Mention the uses of Bleaching powder. **3**
13. a) Write the value of Solar constant.
b) What is the range of wave length of electromagnetic waves that constitute visible radiation?
c) Name the four solar devices. **3**

OR

- a) State the Solar constant.
b) How much solar energy will be received by 1m^2 area in one hour, if the solar constant were 1.4 Kilowatt per square metre?

14. State Big bang theory and Steady State theory. Draw graphically for "Big bang theory". **3**
15. With the help of neat labeled diagram explain the construction and working of Nuclear power Plant. **5**
16. a) Explain the manufacturing process of Sulphuric acid.
b) write the chemical Equation :
[i] with sugar [ii] with copper sulphate. **5**

Section B

17. Write the equation for anaerobic equation. **1**
18. Name any 2 artificial air and water pollutants. **1**
19. Explain the structure of chloroplast with help of neat labeled diagram. **2**
20. Explain any 2 methods used to particulate emission. **2**
21. a) How many X chromosomes are present in Human Being (male and female).
b) Draw the labeled diagram of Human Male reproductive system. **3**

22. What is meant by layering and grafting? Draw the Diagram of layering method.**3**

23. A) "Adrenal glands are known as stress managing glands" Justify the statement.

B) How is the brain is protected from mechanical shock?**3**

24. Describe the mechanism of the blood circulation.**5**