SAMPLE PAPER – 2007
SCIENCE & TECHNOLOGY
CLASS - X

TIME : 2 ½ HOURS Max Marks: 60

GENERAL INSTRUCTIONS:

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 one 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 to 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.

SECTION - A

1. Write the full form of SETI AND PSLV. (1)

2. What happens when a. Ethanol is oxidized with chromic anhydride in glacial acetic acid. (1)

3. Blue colour of Copper Sulphate is destroyed when iron filings are added to it. Why?(1)

4. Cryolite and fluorspar is added to bauxite in the extraction of Aluminium. Why? (1)

5. State Faraday's first law of Electrolysis. The potential difference between the terminals of an electrion iron is 240V and the current is 5.0A. What is the

resistance of the electric current?
(2)

6. Explain “Electroplating” with an example.
(2)
7. Explain the reaction of metals with oxygen. By taking 5 metals as examples, show the reactivity range.
(2)

8. What are polymers? Give an account on the different types of polymers.
(2)
9. A bulb is rated at 200V – 100W. What is its resistance? Five such bulbs burn for 4 hours. What is the electrical energy consumed? Calculate the cost if the rate is 50 paise per unit.
(3)

10. With the help of a diagram, derive the formula for the equivalent resistance for three resistances connected in parallel
(3)

11. Give an explanatory account on Bag Bang and Steady State Theory.
(3)

12. Explain a. Hydraulic washing and b. Froth floatation with the aid of a neat diagram.
(3)

13. Haemoglobin- Haem= _____. Write the diagram of the equipment used in the extraction of this element from its ore. Write the related equations.
(3)

14. Sugar cane juice mixed with yeast is kept in air tight pot. After a few days, this juice started to give a strong smell. Name and explain the process involved in obtaining the main product from this mixture.
(3)

15. “NALCO” is the cheapest producer of ‘X’ in the world. Identify ‘X’ and explain its extraction in pure form from its ore. Support your answer with equations and related diagram.
(5)

16. a. State Ohm’s law and write the related formula.
(1)
b. Explain the factors that affect resistivity of a conductor. (3)
c. ρ = ?. Define the same. (1)

SECTION - B

17. State the function of epiglottis.
(1)

18. Enlist the enzyme present in a. gastric juice b. saliva
(1)

19. Write a neat labeled diagram of chloroplast
(2)

20. Give an account on aerobic respiration.
(2)

21. Give an account of respiration in a. roots b. stem c. leaves. (3)

22. Explain the various steps of Nutrition in Grasshopper.
(3)

23. Explain the effect of a. water b. temperature c. light on the rate of Photosynthesis
(3)

24. With the aid of a neat labeled diagram, explain the process of respiration of Human beings. Add a note on emphysema.
(5)