

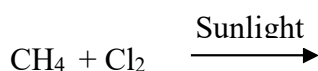
S C I E N C E  
X I

MAX TIME: 45 MIN.

Max. MARKS: 30

## SECTION – A CHEMISTRY (10 MARKS)

Q.1 Complete and balance the following reaction: [1]

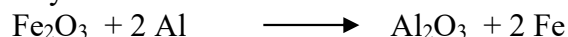


Q.2 Write the chemical equation for the thermal decomposition of lead nitrate. [1]

Q.3 Write structural formula of following. [1]

(i) Ethanoic acid (ii) Butanal

Q.4 Identify the substance oxidized and reduced in following reaction: [1]

Q.5 Draw electron dot structure of following: (i) H<sub>2</sub>O (ii) SiCl<sub>4</sub>. [1]

Q.6 Give reason for the following: [2]

(i) Detergents are better than soap for cleansing action

(ii) Metallic character of K is more than that of Na

Q.7 [3]

From the part of a periodic table, answer the following questions

1 Hydrogen	2	13	14 Carbon	15	16 Oxygen	17 Fluorine
X			P			Q
Y						R
Z						T

- (a) Atomic number of oxygen is 8. What would be the atomic number of Fluorine ?
- (b) Out of 'X' and 'Q' which element has larger atomic size. Give reason for your answer.
- (c) Out of 'Y' and 'Z' which element has smaller atomic size. Give reason for your answer.

## SECTION – B BIOLOGY (10 MARKS)

Q. 1 What are prokaryotic organisms? [1]

Q.2 What is the ratio when Pea plants with round, green seeds is crossed with Pea plants with wrinkled and yellow seeds in F<sub>2</sub> generation of Mendel's experiment? [1]

- Q.3 Differentiate between parenchyma and sclerenchyma. [1]
- Q.4 Name the gland which secretes following hormone : [1]  
(i) Testosterone (ii) Thyroxine
- Q.5 Why is Moss considered to be an amphibian of plant kingdom? [1]
- Q.6 Draw a well labeled diagram of Human digestive system. [2]
- Q.7 Write function of each of the following: [3]  
i) Artery ii) Gene iii) Cerebellum

**SECTION – C PHYSICS (10 MARKS)**

- Q.1 Define potential difference in terms of work done and charge. [1]
- Q.2 A concave mirror of focal length 20 cm is kept in front of an object at a distance of 15cm from it. Find the nature, position and size of the image? [2]
- Q.3 What is meant by 'refraction of light'? Draw a labeled ray diagram to show the refraction of light. [2]
- Q.4 What do you mean by uniform magnetic field? Illustrate using a diagram. [2]
- Q.5 An electric geyser draws a current of 10A from a 220 V supply. What is the cost of using the heater for five hours everyday for 30 days if the cost of 1 unit (1kWh) is Rs. 5.20? [3]