

I SEMESTER EXAM 2017-18
SUBJECT: SCIENCE II

STD : X

MARKS: 40

DATE: 11/10/2017

TIME: 2 Hrs

Q1 (A) Do as directed:

(a) Fill in the blanks:

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1. The area of alveolar surface of lungs is about _____ .
2. Hydrocarbons having the general formula C_nH_{2n-2} are called _____ .

(b) Find the analogy:

1

Saturated hydrocarbon : oxidizing flame :: Unsaturated hydrocarbon : _____ .

(c) Match the following:

2

Sr. No.	A	B
1	Magnesium	Reduction with aluminium
2	Manganese	Reduction with carbon Electrolytic reduction

(B) Rewrite the following statements by selecting the correct options :

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1. In anodizing technique _____ is used as anode.
 - a. Sulphuric acid
 - b. carbon
 - c. aluminium
 - d. aluminium oxide

2. _____ is formed when iron burns in air.
 - a. Iron chloride
 - b. Iron oxide
 - c. Steel
 - d. CO_2

3. Translocation takes place through _____.
 - a. Xylem
 - b. phloem
 - c. blood
 - d. lymph

4. The molecular mass of two adjacent members in homologous series of alkanes differ by _____.
 - a. 16
 - b. 20
 - c. 14
 - d. 12

5. Heart receives oxygenated blood from the lungs through _____.
 - a. Pulmonary artery
 - b. Vena cava
 - c. Aorta
 - d. pulmonary veins

Q2 Attempt any five of the following :

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1. What are stomata? State their functions.
2. How do platelets repair the damaged network of blood vessels?
3. Which organic compounds readily undergo addition reaction? Why?
4. Write a note on corrosion of metals.
5. Distinguish between diamond and graphite.
6. Ionic compounds in the solid state do not conduct electricity but conducts electricity in the molten state.
7. Label the parts mentioned (a), (b), (c) & (d) in the following diagram:

Q3 Attempt any five of the following :

15

1. Give reason: Aluminium is a highly reactive metal, still it is used to make utensils for cooking.
2. With a balanced chemical equation, explain the extraction of copper from its sulphide ore.
3. Explain the following reactions with equation:
 - (a) action of ethyl alcohol with sodium metal.
 - (b) action of ethyl alcohol with phosphorous trichloride (PCl_3).
4. Give reason: Saturated hydrocarbons are excellent fuels.
5. Explain the cleansing action of soap.
6. State the basic steps involved in photosynthesis. Give the reaction of photosynthesis.
7. Write a note on transpiration pull.

Q4 Answer any one of the following:

5

1. Explain with diagram the structure and function of nephron.
2. Explain with suitable diagram, the formation of ionic compounds between metal and a non-metal by transfer of electrons with Magnesium as the metal and chlorine as the non-metal.