

BOARD QUESTION PAPER : MARCH 2016

SCIENCE AND TECHNOLOGY

Time: 2 Hours

Total Marks: 40

Note:

- i. Draw well-labelled diagrams wherever necessary.
- ii. All questions are compulsory.
- iii. Students should write the answers of questions in sequence.

SECTION B

1. (A) Answer the following sub-questions : [5]

- i. Fill in the blank and rewrite the completed statement :
_____ is the largest gland in the body.
- ii. Find the odd one out and write it :
vagina, uterus, vas deferens, ovary
- iii. State whether the statement is true or false :
Aquatic animals breathe at a slower rate than the terrestrial animals.
- iv. Considering the relationship in the first pair, complete the second pair :
rr : Homozygous :: Rr : _____.
- v. Name the following:
Main ore of aluminium

(B) Choose the correct alternative and rewrite the following: [5]

- i. _____ is liberated when acetic acid reacts with sodium metal.
(A) Hydrogen (B) Chlorine
(C) Oxygen (D) Nitrogen
- ii. For binary fission, Amoeba requires _____ parent cells.
(A) Three (B) Two
(C) One (D) Zero
- iii. A solution of CuSO_4 in water is _____ in colour.
(A) Pink (B) Blue
(C) Colourless (D) Green
- iv. Raisins are formed by drying grapes. The process that takes place during formation of raisins from grapes is _____.
(A) Absorption (B) Osmosis
(C) Diffusion (D) Dehydration
- v. Ethanoic acid has a _____ odour.
(A) rotten eggs (B) pungent
(C) vinegar-like (D) mild

2. Answer the following questions (any five): [10]

- i. Differentiate between voluntary and involuntary movements.
- ii. What is the peculiarity of the 'DNA' structure?
- iii. Draw a well-labelled diagram of longitudinal section of a flower.
- iv. Give scientific reason : Roots of plants grow away from light.
- v. Write any two measures to conserve water.
- vi. What are fossils?

3. Answer the following questions (any five): [15]

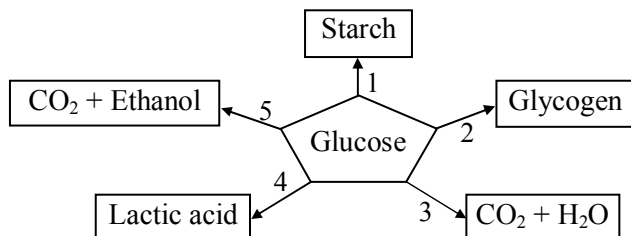
- i. What is an alloy? Give two examples with their chemical composition.
- ii. How is sex determined in human beings?
- iii. State the different types of neurons. Explain their functions.

- iv. What is the '3R' mantra? Write its significance.
- v. Metal A has electronic configuration (2, 8, 1) and metal B has (2, 8, 8, 2). Which is more reactive? Why? Identify these metals.
- vi. Explain the disadvantages of a large family size.

4. Answer the following question (any one):

[5]

- i. Given below are the end products of different reactions involving glucose.



Write the reaction number in front of the following :

- a. Anaerobic reaction =
 - b. Reaction in the human muscles =
 - c. Aerobic respiration =
 - d. Reaction in the plant cells =
 - e. Reaction in the liver =
- ii. What is a homologous series? State any four characteristics of a homologous series.