BOARD QUESTION PAPER : JULY 2015
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) (a) Fill in the blanks: **[2]**

i. _____ is a greenish coloured poisonous gas.

ii. Compounds with identical molecular formula but different structures, are called _____.

(b) Name the following: **[1]**

Cells that assist the neurons in their function.

(c) Match the following: **[2]**

	Column 'I'		Column 'II'
i.	Inhibits plant growth	1.	Breaks large fat globules into smaller ones
ii.	Cytokinins	2.	Auxins
iii.	Cellular respiration	3.	Mitochondria
iv.	Bile	4.	Promote cell division
		5.	Abscisic acid

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

i. Which gas is released in plants during the process of photosynthesis?
(A) Carbon dioxide (B) Oxygen
(C) Nitrogen (D) Hydrogen

ii. To observe the hydra bud clearly, Raju should see it first under the low power lens and then under the high power lens in order to see _____.
(A) less area (B) wide area
(C) more buds (D) all of the above

iii. Reaction of iron nails with copper sulphate solution is an example of _____.
(A) combination reaction (B) decomposition reaction
(C) displacement reaction (D) double displacement reaction

iv. Which of the following is blue in colour?
(A) $CuSO_4$ (B) $FeSO_4$
(C) $ZnSO_4$ (D) $Al_2(SO_4)_3$

v. Acetic acid _____.
(A) turns blue litmus red (B) is insoluble in water
(C) is pale yellow in colour (D) turns red litmus blue.

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

i. Calcium floats over water during the reaction with water. Give reason.
ii. Differentiate between: Toilet soap and Laundry soap.
iii. How do plants get rid of their excretory products?
iv. Draw a well-labelled diagram of a Neuron.
v. Write a short note on regeneration.
vi. What do you mean by 'Connecting Links'? Give one example.

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

i. Explain Mendel's Monohybrid cross. Give an example.

ii. Draw a diagram which shows sex determination in man.

iii. a. What do you mean by seismonastic movement?

b. Name the types of movements in plants. Give *one* example of each movement.

iv. If the electronic configuration of metal A is (2, 8, 1) and that of metal B is (2, 8, 2) then:

a. Which metal is less reactive?

b. Write the names of the two metals.

c. Write the balanced chemical equation of reaction of any *one* metal with hydrochloric acid.

v. What are Allotropes? Name any two allotropic forms of carbon. Give *one* use of it.

vi. a. By which process do green plants synthesize their food?

b. Name the factors which take part in this process.

c. Write the chemical equation of the above process.

4. Answer the following question (any one): **[5]**

i. Name the organs of the human male reproductive system and state the functions of any two organs.

ii. State the functions of the Maharashtra Pollution Control Board.