BOARD QUESTION PAPER : OCTOBER 2013

Time: 2 $\frac{1}{2}$ Hours **Marks: 60**

Note:
i. Use the same answer-sheet for Section A and Section B.
ii. Draw well-labelled diagrams wherever necessary.
iii. All questions are compulsory.
iv. Students should write the answers of questions in sequence.

SECTION A

1. (A) Fill in the blanks and rewrite the completed statements: **[3]**
1. The chemical reactions in which heat is liberated are called _____ reactions.
2. Methyl orange is a _____ type of indicator.
3. The focal length of _____ lens is positive.

(B) Find the odd one out: **[2]**
1. Rubber, Glass, Aluminium, Wood.
2. Reflection, Neutralization, Refraction, Dispersion.

(C) Name the following: **[2]**
1. Horizontal rows in the Modern Periodic Table.
2. The band of coloured components of a light beam.

2. (A) Distinguish between the following: **[2]**
Direct current and Alternating current.

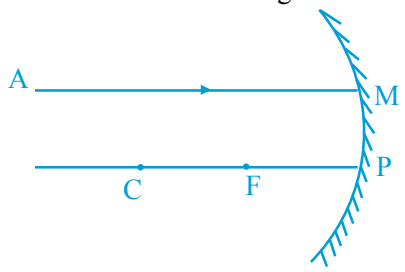
(B) Solve the following numerical: **[2]**
Find the resistance of a conductor if 0.12 A current is passing through it and potential difference of 24 V is applied across it.

(C) Give scientific reason: **[2]**
A simple microscope is used by watch repairers.

3. Answer the following questions (any four): **[12]**
1. Describe the main features of Mendeleev's Periodic Table.
2. A paste of substance A is used to decorate the ceiling of your home
   a. Name the substance A.
   b. Write the reaction of substance A with H_2O.
   c. State the name of the product in the above reaction.
3. State the characteristics of the magnetic lines of force.
4. How do acids and bases react with each other? What is the name of the process? What products are obtained in this reaction?
5. a. What is refraction of light?
   b. What is meant by Refractive index?
   c. Mention any two phenomena in nature where refraction of light takes place.

4. Answer any one of the following questions: **[5]**
1. Find the expression for the resistors connected in parallel. (Draw the circuit diagram)
2. a. Sunita from Std. X is using spectacles, her spectacle number is –1.5.
   Answer the following questions:
   i. Name the defect of eye from which she is suffering. **[1]**
   ii. What type of lens is she using? **[1]**
   iii. Find the focal length of the lens. **[1]**

b. A ray of light AM is incident on a spherical mirror as shown in the diagram. Redraw the diagram on your answer sheet and show the path of the reflected ray. Also indicate and mark the angle of reflection in the diagram.



[2]

SECTION B

5. (A) Rewrite the following statements by selecting the correct options: [3]

1. Brass is an alloy of _____.
   (A) Cu and Sn (B) Cu and Zn
   (C) Fe and C (D) Cu and Ni

2. _____ is the crystalline allotrope of carbon.
   (A) Coal (B) Coke
   (C) Diamond (D) Graphite

3. Taste buds at the tip of the tongue detect _____ taste.
   (A) Sweet (B) Salty
   (C) Sour (D) Bitter

(B) State whether the following statements are true or false: [2]

1. Human heart is made up of five compartments.
2. Lotus flower opens at night, whereas tuberose flower opens during the day time.

(C) Answer the following questions in one sentence each: [2]

1. What is meant by 'Cyst'?
2. What is organic evolution?

6. Answer the following questions in short: [6]

1. Why is sodium stored in kerosene?
2. What is blood pressure? Name the instrument used to measure it.
3. Explain the chemical reaction with a balanced chemical equation–Ethyl alcohol reacts with phosphorus trichloride.

7. Attempt the following questions (any four): [12]

1. Distinguish between voluntary movements and involuntary movements.
2. Metal A has electronic configuration of 2, 8, 1 and metal B has electronic configuration of 2, 8, 2.
   a. Which metal is more reactive? Why?
   b. Identify these metals.
   c. Give the chemical reaction of metal B with dil. HCl.
3. What are vestigial organs? Give some examples of such organs.
4. What do you mean by saturated hydrocarbons and unsaturated hydrocarbons? State their examples.
5. Which are some of the dominant and recessive traits in human beings?

8. Attempt any one of the following questions: [5]

1. Describe the human digestive system with the help of a well labelled diagram.
2. Describe the structure of a flower with the help of a well labelled diagram.