





| Total Questions : 50 Time : |                       |             |                       |  |  |  |
|-----------------------------|-----------------------|-------------|-----------------------|--|--|--|
| PATTERN & MARKING SCHEME    |                       |             |                       |  |  |  |
| Section                     | (1) Logical Reasoning | (2) Science | (3) Achievers Section |  |  |  |
| No. of Questions            | 10                    | 35          | 5                     |  |  |  |
| Marks per Ques.             | 1                     | 1           | 3                     |  |  |  |

**SYLLABUS** 

Section - 1: Verbal and Non-Verbal Reasoning.

**Section – 2 :** Heat, Motion and Time, Electric Current and its Effects, Light, Acids, Bases and Salts, Physical and Chemical Changes, Nutrition in Plants and Animals, Respiration in Organisms, Transportation in Plants and Animals, Reproduction in Plants, Natural Resources and Their Conservation (Forests: Our Lifeline, Wastewater Story).

Section - 3: Higher Order Thinking Questions - Syllabus as per Section - 2.

## LOGICAL REASONING

| <ol> <li>Find the number of rectangles formed in the given figure</li> </ol> | 1. | Find the | number | of rectangles | formed in | the given | figure. |
|--|----|----------|--------|---------------|-----------|-----------|---------|
|--|----|----------|--------|---------------|-----------|-----------|---------|

(A) 10

(B) 11

(C) 12

(D) More than 12



2. How many degrees will the minute hand rotate when the time changes from 1:42 pm to 2:10 pm?

(A) 158°

(B) 238°

(C) 143°

(D) 168°

3. Two different positions of a dice are shown below. Which number will be on the face opposite to the face having number 2?

6



(A) 5

(B) 1

(C) 4

(D) 3

## SCIENCE

4. Different types of changes are listed as:

P: Physical, irreversible

Q : Physical, reversible

R : Chemical, irreversible S : Both physical

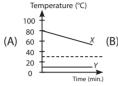
S: Both physical and chemical

Based on these, select the correct statement from the following.

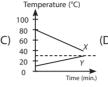
- (A) S can represent burning of candle while P can represent shredding of paper.
- (B) P can represent ripening of a fruit while R can represent rusting of iron.
- (C) P can represent melting of butter while Q can represent cutting a piece of a paper.
- (D) S can represent burning of paper while Q can represent breaking of glass tumbler.
- 5. Which of the following shows the correct path taken by the blood in the human body?
  - (A) Body parts  $\rightarrow$  Lungs  $\rightarrow$  Heart  $\rightarrow$  Body parts

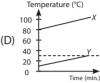
- (B) Body parts  $\rightarrow$  Heart  $\rightarrow$  Lungs  $\rightarrow$  Body parts
- (C) Body parts  $\rightarrow$  Lungs  $\rightarrow$  Heart  $\rightarrow$  Lungs  $\rightarrow$  Body parts
- (D) Body parts  $\rightarrow$  Heart  $\rightarrow$  Lungs  $\rightarrow$  Heart  $\rightarrow$  Body parts
- **6.** Two identical cups, X and Y are filled with water at different temperatures as shown in the given figures. They are placed in a room which is at a temperature of 30°C. Which one of the following graphs correctly shows the variation in the temperature of the water in the cups over a period of time?











- 7. Which of the following statements is correct regarding cross-pollination in plants?
  - (A) It can occur between bisexual flowers only.
  - (B) It does not require any external agents to transfer pollen.
  - (C) It is a type of asexual reproduction.
  - (D) It produces offspring with more genetic variation.
- **8.** Select the incorrect matches.
  - (i) Gastric juice Pepsin
  - (iii) Bile Pancreas
  - (v) Maltase - Oesophagus
  - (A) (ii) and (iii) only
  - (C) (ii), (iii) and (v) only

- (ii) Gall bladder Lactase
- (iv) Hydrochloric acid Stomach **Amylase**
- (vi) Saliva
- (B) (iii) and (iv) only
- (D) (i), (ii) and (vi) only

## **ACHIEVERS SECTION**

**9.** A luminous point object is placed at a point O as shown in the given figure. The image of O is formed at I. Line MN in the figure represents the optical axis.



- Which of the following statement(s) is/are correct?
- (i) If a lens is used to obtain the image, then it must be a diverging lens and its optical centre will be the intersection point of lines MN and Ol.
- (ii) If a mirror is used to obtain the image, then the mirror must be concave and object and image subtend equal angles at the pole of the mirror.
- (iii) Image I is real in nature.
- (A) (iii) only
- (B) (i) and (ii) only (C) (ii) and (iii) only (D) (i), (ii) and (iii)

10. Match column I with column II and select the correct option from the given codes.

|     | Column I<br>(Plant)        |             | Column II<br>(Vegetative propagule)          |
|-----|----------------------------|-------------|--|
| P.  | Oxalis                     | (i)         | Bulb   |
| Q.  | Turmeric                   | (ii)        | Runner                                       |
| R.  | Garlic                     | (iii)       | Stolon                                       |
| S.  | Begonia                    | (iv)        | Rhizome                                      |
| T.  | Strawberry                 | (v)         | Adventitious leaf buds                       |
| (A) | P-(iii), Q-(v), R-(i), S-( | (ii), T-(i  | v) (B) P-(i), Q-(ii), R-(iii), S-(iv), T-(v) |
| (C) | P-(iv), Q-(iii), R-(i), S- | ·(ii), T-(v | v) (D) P-(ii), Q-(iv), R-(i), S-(v), T-(iii) |

## **ANSWER KEY**

1. (D) 2. (D) 3. (D) 4. (A) 6. (C) 7. (D) 8. (C) 9. (C) 10.(D) 5. (D)