

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.

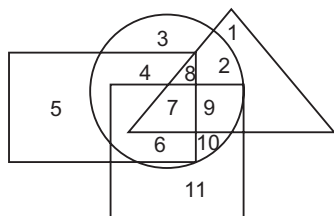
**Section – 2 :** Chemical Reactions and Equations, Acids, Bases and Salts, Metals and Non-metals, Carbon and Its Compounds, Periodic Classification of Elements, Life Processes, Control and Coordination, Reproduction in Organisms, Heredity and Evolution, Light-Reflection and Refraction, Human Eye and Colourful World, Electricity, Magnetic Effects of Electric Current, Sources of Energy, Our Environment and Its Management.

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

**LOGICAL REASONING**

1. In a certain code language, 'si po re' means 'book is thick', 'ti ma re' means 'bag is heavy', 'ka si' means 'interesting book' and 'de ti' means 'that bag'. Which of the following means 'that is interesting' in that code language?
- (A) ka de re                      (B) ti po ka  
(C) de si re                      (D) ka re ma

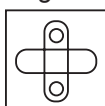
2. In the given figure, rectangle, square, circle and triangle represents the regions of wheat, gram, maize and rice cultivation respectively.

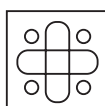


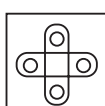
Which area is cultivated by rice and maize only?

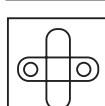
- (A) 9                                      (B) 8  
(C) 2                                      (D) 7

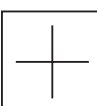
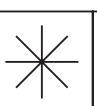
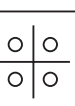
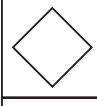
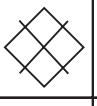

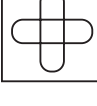
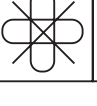
3. Which of the following figures will complete the given figure matrix?

(A) 

(B) 

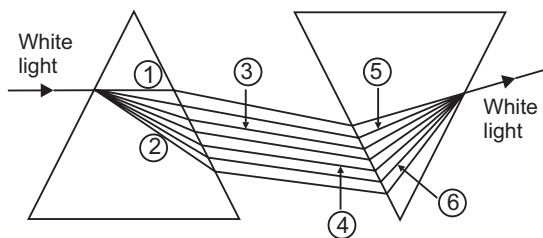
(C) 

(D) 

		
		
		?

**SCIENCE**

4. The given figure shows the phenomenon of recombination of the spectrum of white light using two prisms.

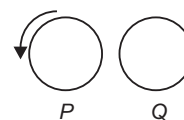


If V, I, B, Y, O and R denote violet, indigo, blue, yellow, orange and red colours respectively, then

which of the following options correctly lists the colour of marked rays?

- ①    ②    ③    ④    ⑤    ⑥
- (A) R    V    B    Y    I    O  
(B) R    V    Y    B    O    I  
(C) V    R    B    Y    I    O  
(D) V    R    Y    B    O    I

5. A constant current of 3.0 A flows counter clockwise in the circular coil P as shown in figure.



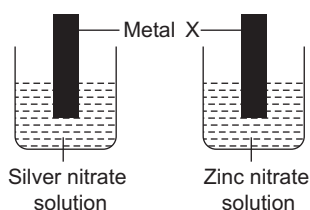
What is the direction of the induced current in the coil Q on the right?

- (A) Clockwise
- (B) Counter clockwise
- (C) Out of the page
- (D) There is no induced current

6. Which of the following statements is true with respect to diamond ?

- (A) The carbon atoms are connected to each other by metallic bonds.
- (B) In the diamond crystal, the carbon atoms are very loosely packed.
- (C) Each carbon atom in the crystal is surrounded by four other carbon atoms forming a rigid 3-D structure.
- (D) Diamond can be synthesised by subjecting pure carbon to very low pressure and temperature.

7. Strips of metal X were dipped into two different solutions as shown :

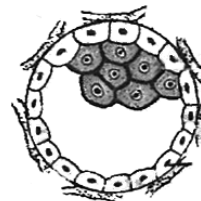


A greyish metallic deposit was found on both strips.

Which of the following could be metal X?

- (A) Cu
- (B) Mg
- (C) Pb
- (D) Fe

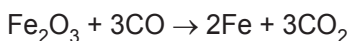
8. Identify the given developmental stage of human embryo and select the correct option regarding it.



Developmental stage	Site of implantation
(A) Blastocyst	Uterine wall
(B) Morula	Uterine wall
(C) Blastula	Mid part of Fallopian tube
(D) Gastrula	Mid part of Fallopian tube

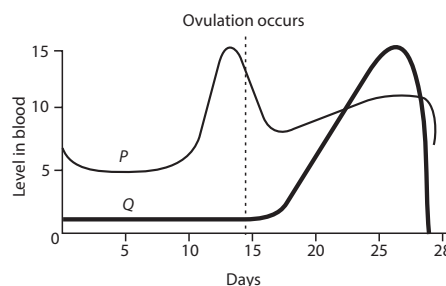
### ACHIEVERS SECTION

9. Which of the following statements about the given reaction are not correct?



- I.  $\text{Fe}_2\text{O}_3$  is getting oxidised to Fe.
  - II.  $\text{Fe}_2\text{O}_3$  is acting as a reducing agent.
  - III. CO is acting as a reducing agent.
  - IV. CO is getting reduced to  $\text{CO}_2$ .
- (A) III only                      (B) I, II and IV  
 (C) II and IV                      (D) I and III

10. The given graph shows the hormonal changes during a normal menstrual cycle. What would be a likely consequence if the hormone represented by graph Q is lacking in an adult female?



- (A) The uterine lining might not be sufficiently stable to support an implanted embryo.
- (B) Levels of the hormone represented by graph P would be higher than normal.
- (C) Fertilization of ovum would fail to occur.
- (D) There would be no significant effect since the functions of the hormones overlap.

SPACE FOR ROUGH WORK

### ANSWERS

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