

## Class - VII

# **School Accelerated Program**

# **ENTRANCE TEST CUM SCHOLARSHIP TEST (Sample Paper-2)**

[Time: 1 Hour 50 Min] [Max Marks: 400]

#### A. General:

- 1. This booklet is a Question Paper containing 100 questions.
- 2. Blank Papers, Clipboards, Log Tables, slide rules, calculators, cellular phones, pagers and electronic gadgets in any form are not allowed to be carried inside the examination hall.
- 3. The answer sheet, a machine-readable optical mark recognition sheet (OMR Sheet), is provided separately.
- 4. DO NOT TAMPER WITH THE OMR OR THE BOOKLET.
- 5. Please fill your roll number correctly in the OMR sheet (answer sheet).
- 6. Both Question Paper and OMR Answer Sheet will be submitted after completion of this examination.

#### B. Question Paper Format and marking scheme:

- The Question Paper consists of five parts (Part I: MAT, Part II: Physics, Part III: Chemistry, Part IV: Biology, Part V: Mathematics).
- 2. Each Question carries +4 marks for correct answer and -1 mark for incorrect answer.

### $\underline{MAT}$

Direction (Q. 1 to 3) In each of the following questions, a number series is given with one term missing. Choose the correct alternative that will continue the same pattern and replace the question mark in the given series.

**1.** 10,9,17, -10,54,?

|     | (a) -      | -82                 | (b)      | -71                       | (c)     | -67                       | (d)    | -103.       |
|-----|------------|---------------------|----------|---------------------------|---------|---------------------------|--------|-------------|
| 2.  | 169,319,   | 519,769,1069,?      |          |                           |         |                           |        |             |
|     | (a) 1      | 401                 | (b)      | 1391                      | (c)     | 1411                      | (d)    | 1419        |
| 3.  | 141,145,   | ,118,134,?,45       |          |                           |         |                           |        |             |
|     | (a) 9      | )                   | (b)      | 81                        | (c)     | 63                        | (d)    | 36.         |
| 4.  | If GOLD    | is coded as HOME    | E, CO    | ME is coded as DONE       | and (   | CORD is coded as DOSE     | , how  | would you   |
|     | code SO    | NS?                 |          |                           |         |                           |        |             |
|     | (a) T      | ГРОТ                | (b)      | TOOT                      | (c)     | TOOS                      | (d)    | TONT        |
| 5.  | In a certa | ain code 'LIMCA' is | writ     | ten as 'HJLDZ'. Which     | of the  | e following words is wri  | tten a | s 'IFWJBP'? |
|     | (a) N      | MEXICO              | (b)      | MERCURY                   | (c)     | JAPAN                     | (d)    | MIDNIGHT    |
| 6.  | Choose a   | a figure which wou  | ld mo    | ost closely resemble the  | e unfo  | olded form of Figure (Z). |        |             |
|     | ×          |                     | 9/       |                           |         |                           |        |             |
|     | (a)        | °°°                 | (b)      | 0 0                       | (c)     | ಿ                         | (d)    | o o         |
| 7.  | Choose a   | a figure which wou  | ld mo    | ost closely resemble the  | e unfo  | olded form of Figure (Z). | •      |             |
|     | X          |                     | <b>~</b> |                           |         |                           |        |             |
|     | (a)        | 44}}                |          |                           | (b)     | $\Longrightarrow$         |        |             |
|     | (c)        | ><>><               |          |                           | (d)     |                           |        |             |
| Di  | rection (Ç | Q. 8 and 9) In each | of the   | following questions,      | choo    | se the correct mirror-im  | age o  | f the       |
| Fig | . (X) fron | n amongst the four  | alter    | natives (a), (b), (c) and | l (d) g | iven along with it.       |        |             |
| 8.  | (X)        |                     |          |                           |         |                           |        |             |
|     | (a)        |                     | (b)      |                           | (c)     |                           | (d)    |             |
| 9.  | (X)        |                     |          |                           |         |                           |        |             |
|     |            | (b) (c)             |          |                           |         |                           |        |             |

(c) c

(d) d

(b) b

(a) a

|     | YJZ  | ?   |  |                               |
|-----|--|---|--|-------------------------------|
|     | (a)  | (b) <b>3</b>  | (c) <b>4</b>                                       | (d) <b></b>                   |
| 11. | Select a suitable figure                           | e from the Answer Figures tl  | nat would replace the quo                          | estion mark (?).              |
|     | <b>Y</b>   \ \                                     | ?   |  |                               |
|     | (a) > •  | (b)   | (c) <b>\\</b>                                      | (d)                           |
| 12. |  | ter image of the question fig   | gure, from the given answ                          | ver figures (assume that      |
|     | water is along XY )                                |   |  |                               |
|     | x v  |   |  |                               |
|     | (a)  | (b)   | (c)  | (d)                           |
| 13. |  | ter image of the question fig   | gure, from the given answ                          | ver figures (assume that      |
|     | water is along XY)                                 |   |  |                               |
|     | x x x x  |   |  |                               |
|     | (a) <b>3</b>                                       | (b) <b></b>   | (c) <b>3</b>                                       | (d)                           |
| 14. |  | hotograph says, "The lady i   |  | -                             |
|     | · ·  | the lady in the photograph  |  | er who has no other sister?   |
|     | (a) Cousin   |   | (b) Sister-in-law                                  |                               |
| 4.5 | (c) Mother   |   | (d) Mother-in-law                                  | ( CD 1471 (1                  |
| 15. | nephew/ neice of Q?                                | or is the sister of $Q$ ; $T$ is the broader  | other of S; S is the daugh                         | ter of R. Who are the         |
|     | (a) $R$ and $P$                                    | (b) P and T   | (c) Q and T  | (d) S and T                   |
| 16. | ( )  | e mother of $B$ ; $A - B$ means $A - B$   | , ,  | ,                             |
|     | and $A \times B$ means $A$ is                      | the sister of $B$ , which of the  | following shows that $P$ is                        | s the maternal uncle of $Q$ ? |
|     | (a) $Q - N + M \times P$                           |   | (b) $P + S \times N - Q$                           |                               |
|     | (c) $P - M + N \times Q$                           |   | (d) $Q - S\%P$                                     |                               |
| 17. | to take the given two s<br>facts. Read the conclus | there are two statements foll<br>statements to be true even if<br>sions and then decide which<br>disregarding commonly kn | they seem to be at variar of the given conclusions | nce from commonly known       |
|     | Statements:  | -   |  |                               |
|     | All pens are roads. All                            | l roads are houses.   |  |                               |
|     |  |   |  |                               |
|     | •  |   |  |                               |
|     |  |   |  |                               |

Select a suitable figure from the Answer Figures that would replace the question mark (?).

|      | Conc  | clusions:  |         |   |            |  |              |             |
|------|-------|--|---------|---|------------|--|--------------|-------------|
|      | I.    | All houses are pens  |         |   | II.        | Some houses are pens.                                    |              |             |
|      | (a)   | Only I is true   |         |   | (b)        | Only II is true  |              |             |
|      | (c)   | Both are true  |         |   | (d)        | Both are false   |              |             |
|      |       |  |         | ~ -   |            | select a figure from the                                 |              |             |
|      |       | en placed in the spa   | ce wh   | nere the question mar   | k is sl    | nown in figure $(X)$ wou                                 | ld cor       | nplete the  |
| figu | re.   |  |         |   |            |  |              |             |
|      | N - T |  |         |   |            |  |              |             |
| 10   | 8     | 6  |         |   |            |  |              |             |
| 18   | 9     | ?  |         |   |            |  |              |             |
|      | (     | X)   |         |   |            |  |              |             |
|      | (a)   |  | (b)     | 8   | (c)        |  | (d)          |             |
|      | ()    |  | (-)     |   | (-)        |  | ()           |             |
|      |       |  |         |   |            |  |              |             |
| 19.  |       | ?  |         |   |            |  |              |             |
|      | ()    | x)   |         |   |            |  |              |             |
|      | (-)   |  | (1-)    |   | (2)        |  | ( <b>.</b> ) |             |
|      | (a)   |  | (b)     |   | (c)        |  | (d)          |             |
| 20.  | Whi   | ch number is in all th   | ne geo  | metrical figures?   |            |  |              |             |
|      |       |  | Ü       | $\wedge$  |            |  |              |             |
|      |       |  |         | 1   | 7          |  |              |             |
|      |       |  |         | $\left \begin{array}{cc}6\\5\end{array}\right \left(4\right)^2$ | 8          |  |              |             |
|      |       |  |         | 7 3   |            | /  |              |             |
|      | (2)   | 3  | (b)     | 1   | (a)        | 5  | (4)          | 8           |
| 21.  | (a)   |  | (b)     | 4   | (c)        | elationship among Tenr                                   | (d)          |             |
| 41.  |       | ers and students.  | iagrai  | ns correctly represents   | s tile i   | elationship among Terii                                  | 115 1411     | is, Chicket |
|      | Piay  | Constitution of the control of the c |         |   |            |  |              |             |
|      | (a)   |  | (b)     | QD  | (c)        | $(\bigcirc)$   | (d)          |             |
|      |       | 1 11   |         | 1 5 4 6   | 11 .       |  | C.           | 1 11 25     |
| 22.  |       | •  | _       |   | •          | g 75 m , he turns to the le<br>n straight again he turns |              |             |
|      |       |  |         | far is he from starting   |            | 0 0  | totik        | c icit and  |
|      | (a)   | 30 m   | (b)     | 35 m  | (c)        | 40 m   | (d)          | 50 m        |
| 23.  | ` '   |  | ` '     |   | ` '        | eft end and C is sixteent                                | ` ′          |             |
|      |       | •  |         |   |            | f C in the row. How mar                                  |              | 0           |
|      | the r | ow?  |         |   |            |  |              |             |
|      | (a)   | 39   | (b)     | 40  | (c)        | 41   | (d)          | 42          |
| 24.  |       |  | ed 13tl | n and 14th respectively   | y in a     | class of 23. What are the                                | ir ran       | ks from the |
|      |       | respectively?  |         |   | <i>a</i> > | 44.1 49.1  |              |             |
|      | (a)   | 10th: 11th   |         |   | (b)        | 11th; 12th   |              |             |
|      | (c)   | 11th; 10th   | . •     | C 11  | (d)        | None of these  | 11 ~         | 1           |
| 25.  |       | •  |         | tollowing sequence w  | nich a     | re immediately followed                                  | 1 by 3       | but not     |
|      |       | ediately preceded by<br>325385568733   |         | 5365335738  |            |  |              |             |
|      |       | One  |         | Two   | (c)        | Three  | (d)          | Four        |

|             |                 |                                 | each of the following quantum and one is different      |                |  |                      | given, out of         |
|-------------|-----------------|---------------------------------|---|----------------|--|----------------------|-----------------------|
| 26.         | (a)<br>(c)      | Broad: Wide<br>Tiny: Small      |   | (b)<br>(d)     | 0  |                      |                       |
| 27.         | (a)             | VWY                             | (b) QRT   | (c)            | LMO  | (d)                  | JKL                   |
| 28.         | If th           | e first three letters of        | the word COMPREHEN                                      | ISION a        | are reversed, then the   | he last three        | letters are           |
|             |                 | ed and then the rema<br>dle. ?  | iining letters are reversed                             | d and ac       | dded, then which le  | etter will be        | exactly in the        |
|             | (a)             | Н                               | (b) N   | (c)            | R  | (d)                  | S                     |
| 29.         | Arra<br>(a)     | nge the given words<br>Restrict | in alphabetical order an<br>(b) Rocket                  | d choos<br>(c) |  | es in the 2nd<br>(d) | l position.<br>Random |
| 30.         | and<br>fig. (   | ~ ·                             | a, you are given a figure (<br>is embeded in one of the |                | •  | _                    |                       |
|             | (a)             |                                 |   | (b)            |  |                      |                       |
|             | (c)             |                                 |   | (d)            |  |                      |                       |
|             |                 |                                 | PHYS  | ICS            |  |                      |                       |
| 31.         | States<br>(a) I | Both statement correc           | d dark line in the symbo                                | (b)            | is positive terminal<br>Both statement inc<br>Statement 1 incorr | correct              | nt 2 correct          |
| 32.         |                 | · ·                             | not a circuit element? (b) Potential Difference         | (c)            | Voltmeter  | (d) Resi             | stor                  |
| 33.         |                 |                                 | n ammeter and voltmete                                  |                | _  |                      |                       |
|             |                 |                                 | urrent while voltmeter n                                |                |  |                      |                       |
|             |                 |                                 | roltage while voltmeter n                               |                |  |                      |                       |
|             |                 |                                 | ime while voltmeter mea                                 |                | C .  |                      |                       |
| 2/1         | ` '             |                                 | listance while voltmeter arough a conductor, the h      |                |  | e unon:              |                       |
| J <b>1.</b> |                 | The material of condu           | · ·   | icat pro       | duced in it depend   | s upon.              |                       |
|             | ` '             |                                 | hrough the conductor                                    |                |  |                      |                       |
|             |                 | The time for which th           | _   |                |  |                      |                       |
|             | ` ,             |                                 | (b) i and iii only                                      | (c) ii         | and iii only   | (d) All i            | ,ii and iii           |
| 35.         | ` '             | •                               | onnecting wires because                                 |                | -  | (-)                  | ,                     |
|             |                 | opper has very high r           | o .   |                | <br>opper has very thicl   | k wires              |                       |
|             |                 | opper offers a lower r          |   | (d) No         |  |                      |                       |
| 36.         |                 |                                 | in filament of electric bu                              | ` '            |  |                      |                       |

(a) Tungsten (b) Copper (c) Aluminium (d) Silver



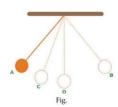
The time period of a simple pendulum is the time taken by it to travel from

(a) A to B and back to A.

(b) O to A, A to B and B to A.

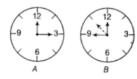
(c) B to A, A to B and B to O.

- (d) A to B.
- 38. Fig. shows an oscillating pendulum

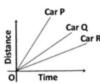


The time taken by the bob to move from A to C is  $t_1$ , and from C to O is  $t_2$ . The time period of this simple pendulum is.

- (a)  $t_1 + t_2$
- (b)  $2(t_1 + t_2)$
- (c)  $3(t_1 + t_2)$
- (d)  $4(t_1 + t_2)$
- **39.** Two clocks A and B are shown in figure. Clock A has an hour and a minute hand whereas clock B has an hour hand, minute hand as well as a second hand. Which of the following statement is correct for these clocks?



- (a) A time interval of 30 seconds can be measured by clock A
- (b) A time interval of 30 seconds cannot be measured by clock B
- (c) Time interval of 5 minutes can be measured by both A and B
- (d) Time interval of 4 minutes 10 seconds can be measured by clock A
- **40.** P, Q and R are three cars in a race competition. Which of the three cars win the race?



(a) P

(b) Q

(c) R

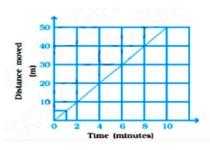
- (d) Cannot be determine
- **41.** Two students were asked to plot a distance-time graph for the motion described in Table A and Table B. The graph given in figure is true for:-

Table A

| Distance moved (m) | 0 | 10 | 20 | 30 | 40 | 50 |
|--------------------|---|----|----|----|----|----|
| Time (minutes)     | 0 | 2  | 4  | 6  | 8  | 10 |

Table B

| Distance moved (m) | 0 | 5 | 10 | 15 | 20 | 25 |
|--------------------|---|---|----|----|----|----|
| Time (minutes)     | 0 | 1 | 2  | 3  | 4  | 5  |



- (a) Both A and B.
- (b) A only.
- (c) B only.
- (d) Neither A nor B
- **42.** The ratio of the unit of acceleration and velocity gives the unit of the physical quantity \_\_\_\_\_
  - (a) Time
- (b) Frequency
- (c) Amplitude
- (d) Speed
- 43. What is the shortest day in the Northern Hemisphere called?
  - (a) Summer solstice
- (b) Equinox
- (c) Winter solstice
- (d) Lunar eclipse
- 44. How many hours of daylight occur at the equator year-round?
  - (a) 10 hours
- (b) 14 hours
- (c) 12 hours
- (d) Varies greatly

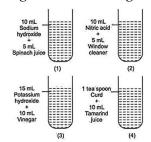
- **45.** What is the path Earth follows around the Sun called?
  - (a) Axis
- (b) Orbit
- (c) Trail
- (d) Curve

#### **CHEMISTRY**

- **46.** Consider the following statements (I-IV) and fill in the blanks by choosing the appropriate option.
  - I. An antacid such as  $\underline{P}$  is used to cure indigestion.
  - II. Lime water contains Q, which turns milky with carbon dioxide.
  - III. Soap solution is basic due to presence of *R*. It turns turmeric stain of shirt to red.
  - IV. Baking soda is  $\underline{S}$  which reacts with vinegar to evolve carbon dioxide gas.

|     | Р                         | Q                         | R                 | S                            |
|-----|---------------------------|---------------------------|-------------------|------------------------------|
| (a) | Milk of magnesia          | Calcium hydroxide         | Sodium hydroxide  | Sodium hydrogen carbonate    |
| (b) | Calcium hydroxide         | Milk of Magnesia          | Sodium hydroxide  | Sodium Hydrogen<br>Carbonate |
| (c) | Sodium hydroxide          | Sodium hydrogen carbonate | Calcium hydroxide | Milk of magnesia             |
| (d) | Sodium hydrogen carbonate | Calcium hydroxide         | Milk of magnesia  | Sodium Hydroxide             |

47. A science teacher has arranged the following: sets of test tubes as



She asked the students to find out the incorrect statement about the above experimental set-up.

- (a) Turmeric solution turns red in test tubes 1 and 3
- (b) China rose indicator turns green in test tubes 2 and 4.
- (c) Red litmus turns blue in test tubes 1 and 3
- (d) Turmeric remains colourless in test tubes 2 and 4.
- 48. Calamine solution is applied on the area of ant bite. Calamine solution contains
  - (a) Sodium carbonate

(b) Sodium Hydrogen carbonate

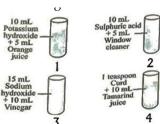
(c) Zinc carbonate

(d) Sodium chloride.

- **49**. A boy was given two test tubes, one containing water and another containing sodium hydroxide. To identify the solutions which of the following indicators can be used by him?
  - (i) Blue litmus
- (ii) Turmeric indicator
- (iii) Phenolphthalein
- (iv) Red litmus

- (a) (i) and (iv)
- (b) (ii), (iii) and (iv)
- (c) only (iv)
- (d) only (iii)
- **50**. A class 7 science teacher arranged the following set of test tubes.

Which of the following observations is correct when these solutions were tested with different indicators?



- (a) In test tubes 1 and 3, turmeric solution remains yellow.
- (b) In test tubes 2 and 4, China rose indicator turns magenta.
- (c) Methyl orange turns red in test tubes 1 and 3.
- (d) Phenolphthalein turns pink in test tubes 2 and 4
- **51**. A milkman added a small pinch of baking soda to fresh milk which had pH close to 6 . As a result, pH of the medium
  - (a) Became close to 2

(b) Became close to 4

(c) Did not undergo any change

- (d) Became close to 8
- **52**. When CO<sub>2</sub> is passed through lime water, it turns milky. Identify the cause for the milkiness.
  - (a) Formation of CaCO<sub>3</sub>

(b) Formation of  $Ca(OH)_2$ 

(c) Formation of H<sub>2</sub>O

- (d) Formation of H<sub>2</sub>
- 53. Match column I with column II and select the correct option from the codes given below.

|     | Column I                       | Column II |  |  |  |
|-----|--------------------------------|-----------|--|--|--|
| (P) | Expansion of metals on heating | (i)       | Neither physical nor chemical change         |  |  |
| (Q) | A stone kept in the sunlight   | (ii)      | Chemical change                              |  |  |
| (R) | Burning of a candle            | (iii)     | Combination of physical and chemical changes |  |  |
| (S) | Curdling of milk               | (iv)      | Physical change                              |  |  |

- (a) (P) (iv), (Q) (i), (R) (iii), (S) (ii)
- (b) (P) (iv), (Q) (iii), (R) (ii), (S) (i)
- (c) (P) (i), (Q) (ii), (R) (iii), (S) (iv)
- (d) (P) (i), (Q) (iv), (R) (ii), (S) (iii)
- 54. Kunal took few iron turnings and mixed them well with sulphur powder. He could separate the iron turnings with the help of a magnet. He heated the mixture for some time and tried to separate the iron turnings with the magnet but he could not. Why?
  - (a) On heating, a chemical change takes place and a new compound is formed.
  - (b) On heating, iron becomes non-magnetic hence, it is not attracted by magnet.
  - (c) On heating, a physical change takes place hence iron and sulphur gets mixed up.
  - (d) On heating, iron evaporates and only sulphur is left behind.
- 55. Which of the following is/are true when milk changes into curd?
  - (i) Its state is changed from liquid to semi solid.
  - (ii) It changes colour.
  - (iii) It changes taste.
  - (iv) The change cannot be reversed.

|             | Choose the correct option  | n from below :               |         |                         |         |                      |  |  |  |
|-------------|--|------------------------------|---------|-------------------------|---------|----------------------|--|--|--|
|             | (a) (i) and (ii) are correct   | ct                           | (b)     | (ii) and (iii) are con  | rrect   |                      |  |  |  |
|             | (c) (i), (iii) and (iv) are  | correct                      | (d)     | (i) to (iv) are corre   | ct      |                      |  |  |  |
| <b>56</b> . | Two drops of dilute sulphuric acid were added to 1 g of copper sulphate powder and then small          |                              |         |                         |         |                      |  |  |  |
|             |  | s added to dissolve it (step | o I). C | On cooling, beautiful   | blue    | colored crystals got |  |  |  |
|             | separated (step II). Step  | -                            |         |                         |         |                      |  |  |  |
|             | •  | cal changes respectively.    |         |                         |         |                      |  |  |  |
|             |  | ical changes respectively    |         |                         |         |                      |  |  |  |
|             | (c) Both physical chang  |                              |         |                         |         |                      |  |  |  |
|             | (d) Both chemical chan   | ~                            |         |                         |         |                      |  |  |  |
| 57.         | Nidhi took two China dishes and marked them as I and II. In China dish I, she mixed iron filings and   |                              |         |                         |         |                      |  |  |  |
|             | sulphur powder. In China dish II, she mixed iron filings and sulphur powder and then heated it for     |                              |         |                         |         |                      |  |  |  |
|             | few minutes. What were her observations in both the dishes?  |                              |         |                         |         |                      |  |  |  |
|             | (a) In China dish I, a mixture is formed, where iron filings and sulphur powder can be seen separately |                              |         |                         |         |                      |  |  |  |
|             | (b) In China dish II, a c  | ompound is formed, which     | ch is h | neterogenous.           |         |                      |  |  |  |
|             | (c) A colorless and odo  | ourless gas was produced     | in Ch   | ina dish II             |         |                      |  |  |  |
|             | (d) All the above observ   | vations are correct.         |         |                         |         |                      |  |  |  |
| <b>58</b> . | The element, compound  | and mixture in the given     | list is | s: cobalt, ink, milk, n | narble  | e, ozone.            |  |  |  |
|             | (a) Cobalt is an elemen  | t, milk and ink are mixtur   | es, oz  | zone and marble are     | comp    | oounds               |  |  |  |
|             | (b) Cobalt is an elemen  | t, milk and marble are mi    | xture   | s, ozone and ink are    | comp    | oounds               |  |  |  |
|             | (c) Cobalt and ozone as  | re elements, milk and ink    | are m   | nixtures, and marble    | is a c  | ompound              |  |  |  |
|             | (d) Cobalt is an elemen  | t, milk is a mixture, ink, o | zone    | and marble are com      | poun    | ds                   |  |  |  |
| <b>59</b> . | What is the Latin name   | of Potassium?                |         |                         |         |                      |  |  |  |
|             | (a) Kalium   | (b) Natrium                  | (c)     | Stannum                 | (d)     | Hydrargyrum          |  |  |  |
| <b>60</b> . | What is the condition for  | r something to be called n   | natter  | ?                       |         |                      |  |  |  |
|             | (a) It should has mass   |                              | (b)     | It should occupy s      | ome s   | space                |  |  |  |
|             | (c) It should have both  | mass and volume              | (d)     | It should have ma       | ss or v | volume               |  |  |  |
|             |  | BIOL                         | OGY     |                         |         |                      |  |  |  |
| 61.         | What is the process calle  | ed when plants produce th    | neir o  | wn food using sunli     | ght?    |                      |  |  |  |
|             | (a) Respiration  | (b) Photosynthesis           | (c)     | Transpiration           | (d)     | Excretion            |  |  |  |
| <b>62.</b>  | Which part of the plant  | transports water and mine    | erals f | from the roots to the   | leave   | es?                  |  |  |  |
|             | (a) Xylem  | (b) Phloem                   | (c)     | Cambium                 | (d)     | Cortex               |  |  |  |
| 63.         | What is the main byprod  | duct of photosynthesis?      |         |                         |         |                      |  |  |  |
|             | (a) Oxygen   | (b) Carbon dioxide           | (c)     | Water                   | (d)     | Starch               |  |  |  |
|             | TATE   |                              |         |                         |         |                      |  |  |  |
| 64.         | · ·  | s the primary site for pho   | -       | •                       | ( 1)    | T.I.                 |  |  |  |
| <b>.</b> -  | (a) Roots  | (b) Stems                    | (c)     | Leaves                  | (d)     | Flowers              |  |  |  |
| 65.         | The green pigment in th  |                              | ( )     | D . 1 .                 | ( 1)    |                      |  |  |  |
|             | (a) Chlorophyll  | (b) Hemoglobin               | ` '     | Protoplast              | (d)     | Haemocyanin          |  |  |  |
| 66.         | · ·  | s the most common respin     | -       |                         |         | <b>.</b>             |  |  |  |
|             | (a) Vitamins   | (b) Fats                     | ` '     | Glucose                 | (d)     | Proteins             |  |  |  |
| 67.         | o .  | y plants during photosyn     |         |                         | ,       |                      |  |  |  |
|             | (a) Oxygen   | (b) Carbon dioxide           | ` '     | Nitrogen                | (d)     | Hydrogen             |  |  |  |
| 68.         | •  | g photosynthesis and stor    |         |                         |         |                      |  |  |  |
|             | (a) Oxygen   | (b) Glucose                  | (c)     | Protein                 | (d)     | Fiber                |  |  |  |

| 69.         | . Greater number of stomata are found in   | ·  |                      |                |                 |        |  |  |  |
|-------------|--|--|----------------------|----------------|-----------------|--------|--|--|--|
|             | (a) Upper surface of leaves  | (b)  | Lower surface        | e of leaves    |                 |        |  |  |  |
|             | (c) Stems  | (d)  | Roots                |                |                 |        |  |  |  |
| 70.         | Which of the following is a characteristic of parasitic plants?                          |  |                      |                |                 |        |  |  |  |
|             | (a) They have roots that anchor them firmly in   | (a) They have roots that anchor them firmly in the soil. |                      |                |                 |        |  |  |  |
|             | (b) They contain chlorophyll and can produce their own food.                             |  |                      |                |                 |        |  |  |  |
|             | (c) They have specialized structures called have   | ustoria to   | o absorb nutrie      | ents from the  | e host.         |        |  |  |  |
|             | (d) They are completely independent of other   | plants fo  | or survival.         |                |                 |        |  |  |  |
| <b>71.</b>  | . What type of nutrition is characterized by the a                                       | bility to  | produce their        | own food?      |                 |        |  |  |  |
|             | (a) Heterotrophic (b) Saprophytic  | (c)  | Autotrophic          | (d) ]          | Parasitic       |        |  |  |  |
| 72.         | . Raw banana has a bitter taste, while ripe bana   | na has s   | weet taste. It h     | appens beca    | ause of convers | sion o |  |  |  |
|             | ·  |  |                      |                |                 |        |  |  |  |
|             | (a) Starch to sugar  | (b)  | o) Sucrose to starch |                |                 |        |  |  |  |
|             | (c) Amino acids to sugars  | (d)  | Amino acids          | to proteins    |                 |        |  |  |  |
| 73.         | . What is the principal source of energy input to  | biologica  | al systems?          |                |                 |        |  |  |  |
|             | (a) Carbohydrates from plants.   | (a) Carbohydrates from plants. (b) Light from the sun.   |                      |                |                 |        |  |  |  |
|             | (c) Nutrients from the soil. (d) Oxygen from the air.                                    |  |                      |                |                 |        |  |  |  |
| <b>74.</b>  | . Which of the following is an example of an orga  | anism th   | at exhibits sap      | rotrophic nu   | ıtrition?       |        |  |  |  |
|             | (a) A green plant (b) A mushroom   | (c)  | A tapeworm           | (d) .          | A cactus        |        |  |  |  |
| <b>75.</b>  | . Plant that lives on or inside another living organ                                     | nism and   | d gets its food      | from it is cal | led a           | ·      |  |  |  |
|             | (a) Saprophyte (b) Autotroph   | (c)  | Parasite             | (d) S          | Symbiont        |        |  |  |  |
|             |  | IEMATI   | CS                   |                |                 |        |  |  |  |
| <b>76</b> . | Evaluate: $\frac{(-16) \div [(-13) + (-3)]}{(-60) \div (-60)}$                           |  |                      |                |                 |        |  |  |  |
|             | (a) 2 (b) -1   |  | (c) 1                |                | (d) -2          |        |  |  |  |
| 77.         | . Which of the following number sentences best of  | describes  | the problem s        | shown on the   | e number line?  |        |  |  |  |
|             | <del></del>  |  | _                    |                |                 |        |  |  |  |
|             | <del>\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ </del>  | 2 3 4 5  | <b>&gt;</b>          |                |                 |        |  |  |  |
|             | (a) $-2 + (-4)$ (b) $-5 + 3$   |  | (c) $5 + (-3)$       |                | (d) $-4+2$      |        |  |  |  |
| <b>78</b> . | . Which pair of numbers does not have a product  | t equal to   |                      |                |                 |        |  |  |  |
|             | (a) $\{-4, -9\}$ (b) $\{-3, -12\}$   |  | (c) $\{-1, -72\}$    | -              | (d) {1,36}      |        |  |  |  |
| <b>79</b> . | . Maya goes 35 km east from a point A to point B   |  |                      |                | _               |        |  |  |  |
|             | the distance travelled in the west direction is re                                       | -  |                      | -              | -               | resen  |  |  |  |
|             | the distance travelled in the east? By which inte  | ger wiii j   | -                    | -              |                 |        |  |  |  |
|             | (a) Positive integer, 5 km   |  | (b) Negative         | C              |                 |        |  |  |  |
| 90          | (c) Positive integer, 2 km  The following number line shows the temperature.             | da   | (d) Negative         | C              |                 |        |  |  |  |
| ðU.         | . The following number line shows the temperature particular day. Find P , $Q$ and $R$ . | are in ae  | gree Ceisius (       | c) at differe  | ent places on a |        |  |  |  |
|             | Yamuna Nagar<br>Kashmir Pathankot Manali Meerut  |  |                      |                |                 |        |  |  |  |
|             | ← 111111111111111111111111111111111111   |  |                      |                |                 |        |  |  |  |
|             | (i) The temperature difference between the ho  |  | -                    |                | _•-             |        |  |  |  |
|             | (ii) The temperature difference between Yamur  | _  |                      |                |                 |        |  |  |  |
|             | (iii) The temperature difference between Pathar  | nkot and   | Kashmir is           | <u>R</u> .     |                 |        |  |  |  |

|             |                     | P  | Q                        | R                             |  |                 |                                     |                      |
|-------------|---------------------|--|--------------------------|-------------------------------|--|-----------------|-------------------------------------|----------------------|
|             | (A)                 | 31°C   | 8°C                      | 5°C                           |  |                 |                                     |                      |
|             | (B)                 | 30°C<br>31°C                                     | 18°C<br>18°C             | 6°C<br>6°C                    |  |                 |                                     |                      |
|             | (C)<br>(D)          | 30°C   | 7°C                      | 8°C                           |  |                 |                                     |                      |
| 81.         |                     |  |                          |                               | $\left(1 - \frac{1}{4}\right) \dots \left(1 - \frac{1}{10}\right)$ | =               |                                     |                      |
|             | (a) $\frac{10}{11}$ |  | 2) (                     |                               | 1 9  | (c)             | $\frac{1}{10}$                      | (d) $\frac{1}{2}$    |
| <b>82</b> . | If we               | multiply   | a fractio                | n by itself                   | f, the fraction th   | us obtained     | is $\frac{16}{81}$ . The original f | raction is           |
|             | (a) $\frac{8}{27}$  |  |                          |                               | $2\frac{2}{3}$   | (c)             | 4                                   | (d) $\frac{4}{9}$    |
| 83.         | If the              | LCM of   | three nui                | mbers is 9                    | 570, then their  | HCF is          | •                                   | ,                    |
|             | (a) 1               |  |                          |                               | 12   | (c)             |                                     | (d) 21               |
| 84.         | ` '                 |  | sentation                | n of $3 \times \frac{2}{3}$ i |  | ` ,             |                                     | <b>、</b>             |
|             | (a) (               |  |                          | (b)                           |  | (c)             |                                     | (d) (d)              |
| 85.         | Simpl               | ify: $\frac{(0.2 \times 0.1)}{(0.1 \times 0.1)}$ | (0.2+0.01)<br>(0.1+0.02) |                               |  |                 |                                     |                      |
|             | (a) $\frac{5}{3}$   |  |                          |                               |  | (b)             | <u>41</u><br>12                     |                      |
|             | (c) $\frac{41}{4}$  | <u>1</u>   |                          |                               |  | (d)             | <u>9</u><br>5                       |                      |
| 86.         | 54.327              | $7 \times 357.2$                                 | $2 \times 0.005$         | 7 is the sa                   | me as  |                 |                                     |                      |
|             | (a) 5.              | .4327 × 3  | $3.572 \times 5$         | 5.7                           |  | (b)             | $5.4327 \times 3.572 \times$        | 0.57                 |
|             | (c) 5               | $4327 \times 3$                                  | $3572 \times 0.$         | 0000057                       |  | (d)             | 5432.7 × 3.572 ×                    | 0.000057             |
| 87          | Sneha               | and Sid  | ak have :                | ₹ 41 altog                    | ether <sup>1</sup> of Sneh   | a's money is    | ₹ 2 more than <sup>1</sup> of :     | Sidak's money. How   |
| 07.         |                     |  | Sneha ha                 |                               | 4  | a b intolley is | 7                                   | siduk s money. 110 w |
|             | (a) ₹               | •  | 21101101111              |                               | ₹20  | (c)             | ₹ 30.50                             | (d) ₹29              |
| 88.         | ` '                 |  | narts can                | ` '                           |  | ` '             | ual lengths of 65 m                 | ` '                  |
|             |                     | v manv i   | our to carr              | a rou or ic                   | にをはし エノ・ン エに レに・に  | MORCH HILO CO   | uai iciiguis oi oo iii              | •                    |

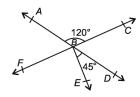
- 88.
- **89**. Which of the following statements is CORRECT?
  - (a) The products of fractions are expressed as  $\frac{Product\ of\ the\ numerators}{Product\ of\ the\ denominators}$
  - (b) The product of two proper fractions is greater than the individual fractions involved in the operation.
  - (c) The product of a proper and an improper fraction is less than the proper fraction.
  - (d) When a decimal number is to be divided by 10,100 or 1000, the decimal in the decimal number is shifted to the right.
- 90. Mohit and Rohit go for shopping to a mall. They bought a pair of jeans and 2 shirts.

|                   | Store P | Store Q | Store R |
|-------------------|---------|---------|---------|
| One pair of Jeans | ₹399.70 | ₹449.90 | ₹499.50 |
| One Shirt         | ₹222.40 | ₹224.80 | ₹204.60 |

- (a) At which store should Mohit and Rohit shop to spend the least amount of money?
- (b) Mohit and Rohit bought a pair of jeans from store R, 1 shirt from store P and another shirt from store Q. If they had ₹ 1000, how much will be left?



- (A) S ₹52
- (B) P ₹53.30
- (C) Q ₹53.30
- (D) Q ₹65.50
- **91**. In the figure, *AD* and *CF* are straight lines. Find  $\angle EBF$ .

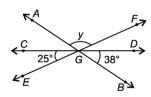


(a) 70°

(b) 120°

(c) 75°

- (d) 95°
- **92**. In the figure, (not drawn to scale), AGB, CGD and EGF are straight lines. Find  $\angle y$

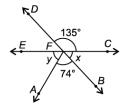


(a) 97°

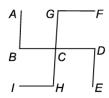
(b) 127°

(c) 100°

- (d) 117°
- 93. In the figure, (not drawn to scale), *EFC* and *DFB* are straight lines. Find  $\angle x$  and  $\angle y$  respectively.



- (a)  $40^{\circ}, 62^{\circ}$
- (b) 45°,61°
- (c)  $47^{\circ}, 54^{\circ}$
- (d) 40°,60°
- **94**. In the given figure, AB ||GH||DE, GF ||BD||HI and  $\angle FGC = 80^{\circ}$ . Find the value of  $\angle CHI$ .



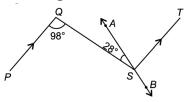
(a) 80°

(b) 120°

(c) 100°

(d) 160°

**95**. In the figure, PQ is parallel to ST. AB is a straight line. Find  $\angle BST$ .



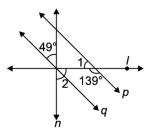
(a) 110°

(b) 125°

(c) 152°

(d) 98°

**96**. If p || q, then find the value of  $\angle 1$ ,  $\angle 2$  and  $\angle 1 + \angle 2$  respectively.



- (a)  $41^{\circ}, 90^{\circ}, 131^{\circ}$
- (b) 42°,89°,131°
- (c) 90°, 41°, 131°
- (d) 49°, 41°, 90°

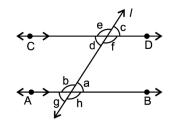
- 97. Fill in the blanks.
  - (i) A <u>P</u> has two end points.
  - (ii) A line has <u>Q</u> end points on either side.
  - (iii) A  $\underline{\phantom{a}}$  is a line that intersects two or more lines at distinct points.
  - (iv) An <u>S</u> is formed when two rays meet.

|     | P            | Q   | R           | S     |
|-----|--------------|-----|-------------|-------|
| (A) | Line         | Two | Ray         | Angle |
| (B) | Line Segment | No  | Transversal | Angle |
| (C) | Ray          | No  | Transversal | Line  |

- (D) Line Two Transversal Angle segment
- 98. Which of the following options holds?

**Statement-1:**  $\angle e$  and  $\angle h$  are supplementary angles.

**Statement -2:**  $\angle c + \angle d + \angle h + \angle b = 360^{\circ}$ 



- (a) Both Statement-1 and Statement-2 are true.
- (b) Statement- 1 is true but Statement- 2 is false.
- (c) Statement-1 is false but Statement-2 is true.
- (d) Both Statement-1 and Statement-2 are false.

- 99. How many lakhs make a billion?
  - (a) 100

- (b) 1000
- (c) 10000

(d) 100000

- 100. What is the place value of the digit '5' in the number 3,578,901?
  - (a) 500000
- (b) 50000
- (c) 5000

(d) 500