

TEST ID : 601

MAX. MARKS : 500

EXAM DURATION : 2 HOURS

Roll No.

Name :

Exam Date : .....

# M-STAR<sup>★</sup>

Momentum Scholarship Test for Admission & Rewards

8<sup>th</sup> Edition, 2023-24

Talent HUNT Exam



**Class VI Studying Students  
Mathematics, Science & Logical Reasoning**

## INSTRUCTIONS FOR CANDIDATE

1. This booklet is your Question Paper. Do not open this booklet before being instructed to do so by the invigilator.
2. You may complete Your Name, Roll No. on the cover page.
3. Blank spaces and blank pages are provided in this booklet for your rough work. No Additional sheet will be provided for rough work.
4. Blank papers, clipboards, log tables, slide rules, calculators, cameras, cellular phones, pagers and electronic gadgets are NOT allowed inside the examination hall.
5. **Using a Blue/Black Pen, Darken the bubbles on the OMR sheet**
6. DO NOT TAMPER WITH/MUTILATE THE OMR OR THE BOOKLET
7. In the booklet, check that all the 100 questions and corresponding answer choices are legible.
8. Write your name, class and the Father's name in the boxes provided on the right part of the OMR. Do not write any of this information anywhere else. Darken the appropriate bubble under each digit of your Roll Number and Test ID Number.
9. The question paper consists of three sections. **Section A** consists of **Mathematics**, **Section B** consists of **Science** and **Section C** consists **Logical Reasoning Questions**.
10. **Section A** contain 35 multiple choice questions, **Section B** contain 40 multiple choice questions and **Section C** contains 25 multiple choices questions. Each question has four choices (A), (B), (C) and (D) out of which **ONLY ONE** is correct.
11. Marking Scheme: **+5** for correct answer, **0** for unattempted and **-1** for wrong attempt .
12. On completion of the test, the candidate must hand over the **OMR** Sheet to the invigilator on duty in the Room/Hall.



# MOMENTUM

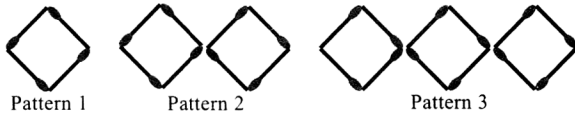
छात्रसंघ चौक, गोरखपुर | बस्ती | देवरिया



## SECTION - A : Math

This section contains **35 multiple choice questions**. Each question has 4 choices (A), (B), (C) and (D) out of which **ONLY ONE** is correct.

1. Find the number of matchsticks that will be used in pattern 32.



- A. 145  
B. 224  
C. 128  
D. 212
2. A figure is formed by putting two squares one on the other as shown in the figure. If the length of each side of the two squares is 8 cm, then the perimeter of the figure formed is \_\_\_\_.
- A. 56 cm  
B. 64 cm  
C. 32 cm  
D. 48 cm



3. According to census 2011, the population of India is 1,210,193,422. Which of the following options will represent this number in International System of Numeration?
- A. One hundred twenty one crore one lakh ninety three thousand four hundred twenty two  
B. One billion two hundred ten million one hundred ninety three thousand four hundred twenty two  
C. Twelve billion ten million one hundred ninety three thousand four hundred twenty two  
D. One hundred twenty one crore nineteen lakh three thousand four hundred twenty two
4. What is to be subtracted from 67.74 to get 24.48?
- A. 33.46  
B. 38.46  
C. 33.26  
D. 43.26

5. What is the sum of the greatest and the smallest 5-digit number that can be formed from the digits 0, 7, 5, 2 and 1 (use each digit only once)?

- A. 58,467  
B. 85,467  
C. 76,467  
D. 65,467

6. Which of the following shows the maximum rise in temperature?

- A.  $0^{\circ}\text{C}$  to  $10^{\circ}\text{C}$   
B.  $-4^{\circ}\text{C}$  to  $8^{\circ}\text{C}$   
C.  $-15^{\circ}\text{C}$  to  $-8^{\circ}\text{C}$   
D.  $-7^{\circ}\text{C}$  to  $1^{\circ}\text{C}$

7. Which of the following pair of numbers are co-prime?

- A. 39, 91  
B. 161, 192  
C. 385, 462  
D. 189, 243

8. What least value should be given to \* so that the number  $653*47$  is divisible by 11?

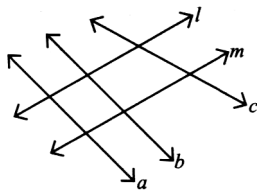
- A. 9  
B. 6  
C. 7  
D. 1

9. What type of angle will be formed between the hour hand and the minute hand of a clock at 12:40?



- A. Acute angle  
B. Obtuse angle  
C. Right angle  
D. Straight angle

10. Find the number of pairs of parallel lines in the given figure.



- A. 1
- B. 2
- C. 3
- D. 4

11. Find the value of  $2a + 5b$ , if  $a : 3 = 72 : 27 = 40 : b$ .

- A. 20
- B. 75
- C. 91
- D. None of these

12. Which of the following is the simplest form of  $\frac{161}{299}$ ?

- A.  $\frac{7}{13}$
- B.  $\frac{3}{11}$
- C.  $\frac{11}{17}$
- D.  $\frac{17}{23}$

13. Which of the following set of whole numbers will make the given number sentence true?

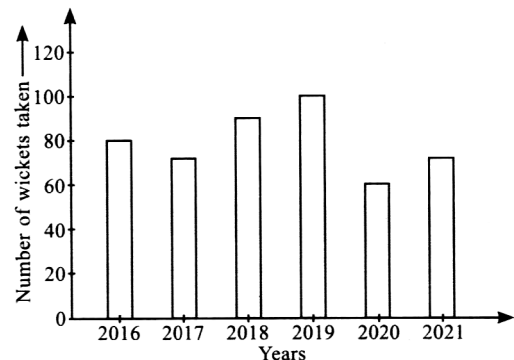
$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = 49$$

- A. 7, 8, 7
- B. 5, 8, 9
- C. 7, 8, 10
- D. 9, 8, 5

14. Find the value of  $DXXXIX + CCCLXVII - DCLXXXI$ .

- A. CCCXXV
- B. DCLVI
- C. DCCXI
- D. CCXXV

15. The given bar graph shows the number of wickets taken by a player X from the year 2016 to 2021. Study the graph carefully and answer the given question.



Find the ratio of number of wickets taken by the player in years 2017 and 2021 together to 2016 and 2019 together.

- A. 3 : 5
- B. 4 : 7
- C. 7 : 9
- D. 5 : 9

16. How many right angles are formed when hour hand of a clock moves from

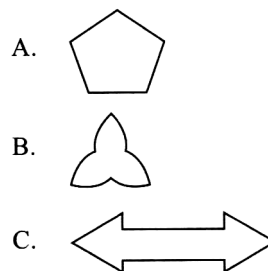
- (a) 2 to 8
- (b) 6 to 9?

- |    | (a) | (b) |
|----|-----|-----|
| A. | 1   | 1   |
| B. | 1   | 2   |
| C. | 2   | 2   |
| D. | 2   | 1   |

17. If  $x$  and  $y$  are odd numbers, then which of the following is even?

- A.  $x + y$
- B.  $x + y + 1$
- C.  $xy$
- D.  $xy + 2$

18. Which of the following figures has exactly three lines of symmetry?



- D. None of these

19. What is the difference between the shaded fractions of the given figures?

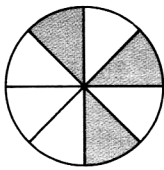


Fig. (i)



Fig. (ii)

- A.  $\frac{1}{24}$   
 B.  $\frac{5}{12}$   
 C.  $\frac{5}{24}$   
 D.  $\frac{1}{12}$
20. Which of the following are not in proportion?  
 A. 28, 42, 30, 45  
 B. 15, 21, 25, 35  
 C. 21, 35, 32, 48  
 D. 24, 40, 12, 20
21. Ansh multiplied 160 by 89 instead of multiplying by 79. How much was his answer greater than the correct answer?  
 A. 1600  
 B. 16000  
 C. 10060  
 D. 10640
22. Rehan bought a notebook of ₹  $14\frac{1}{3}$ , a geometry box of ₹  $57\frac{1}{2}$  and a Mathematics book of ₹  $71\frac{2}{3}$ . How much money should he pay to the shopkeeper?  
 A. ₹  $123\frac{1}{2}$   
 B. ₹  $143\frac{1}{2}$   
 C. ₹  $123\frac{1}{6}$   
 D. ₹  $143\frac{1}{6}$

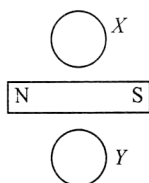
23. Arun wants to donate ₹4200 between two persons  $X$  and  $Y$  in the ratio of 5:7. Find the amount of money that  $X$  and  $Y$  will get respectively.  
 A. ₹ 2450, ₹ 1750  
 B. ₹ 1750, ₹ 2450  
 C. ₹ 1950, ₹ 2300  
 D. ₹ 2300, ₹ 1950
24. Amisha runs 7 km towards South, then from there she came back in the opposite direction and runs 9 km. If South represents negative integer and North represents positive integer, then find her position from initial point.  
 A. 16 km  
 B. -2 km  
 C. -16 km  
 D. 2 km
25. A rectangular mat is laid on the square floor of side 26 m. The length of the rectangular mat is 18 m and its breadth is two-third of its length. Find the area of floor where mat is not laid.  
 A.  $460 \text{ m}^2$   
 B.  $270 \text{ m}^2$   
 C.  $410 \text{ m}^2$   
 D. None of these
26. Sushant slept at 10 p.m. and woke up at 7 a.m. How many right angles did hour hand of clock make during this period of time?  
 A. 2  
 B. 3  
 C. 1  
 D. None of these
27. A container  $X$  has 24.25 litres of water and another container  $Y$  has 17.75 litres of water. Both containers  $X$  and  $Y$  together are enough to fill one-fifth of a tank  $Z$ . What is the total capacity of the tank  $Z$ ?  
 A. 110 L  
 B. 160 L  
 C. 210 L  
 D. 260 L
28. In a university, there are three options for students to choose their streams *i.e.*, Science, Commerce and Arts. In a particular session, 1,54,676 students were enrolled in all streams. If 1,26,136 students were enrolled in Science and Commerce stream together, then find the number of students enrolled in Arts stream in that session.  
 A. 28,540  
 B. 45,017  
 C. 65,017  
 D. 35,017

29. Three boys steps off together from the same spot. Their steps measures 63 cm, 70 cm and 77 cm respectively. What is the minimum distance each should cover so that all can cover distance in complete steps?
- A. 6930 cm  
B. 6000 cm  
C. 7000 cm  
D. 6520 cm
30. To make a specific dress, a cloth of length 4 m 25 cm is needed. Find the total length of cloth required to make 3 such dresses.
- A. 12.75 m  
B. 13.75 m  
C. 16.25 m  
D. 19.25 m
31. Fill in the blanks and select the correct option.
- Area of a digital rectangular board whose length is P m and width is 13 m, is 182 sq. m.
  - Sam has to cover the floor of his room by square tiles of side 2 m each. If the length of the floor is 10 m and width is 8 m, then Q tiles will completely cover the floor of the room.
  - A square and a rectangle has same perimeter. Length of rectangle is R m, if its breadth is 11 m and side of square is 14.5 m:
- |    | <b>P</b> | <b>Q</b> | <b>R</b> |
|----|----------|----------|----------|
| A. | 12       | 16       | 15       |
| B. | 14       | 20       | 18       |
| C. | 16       | 12       | 15       |
| D. | 14       | 18       | 14       |
32. Match the following and select the correct option.
- |     | <b>Column I</b>   | <b>Column II</b> |
|-----|---|------------------|
| (P) | The difference between the successor and predecessor of 305 is _____. | (i) -1005        |
| (Q) | Subtract 93 from the sum of -678 and -234 = _____.                    | (ii) -16         |
| (R) | The integer which is 8 more than -24 is _____.                        | (iii) 2          |
- |    | <b>(P)</b> | <b>(Q)</b> | <b>(R)</b> |
|----|------------|------------|------------|
| A. | (i)        | (ii)       | (iii)      |
| B. | (iii)      | (i)        | (ii)       |
| C. | (ii)       | (iii)      | (i)        |
| D. | (i)        | (iii)      | (ii)       |
33. Study the following statements and select the correct option.
- Statement-I** : The fraction of prime numbers from 1 to 30 is  $\frac{1}{3}$ .
- Statement-II** : Ajay spent  $2\frac{1}{6}$  hours in reading a story book and spent  $\frac{1}{3}$  of an hour in playing game.
- So, total time spent in all by him is  $2\frac{1}{2}$  hours.
- A. Both Statement-I and Statement-II are true.  
B. Both Statement-I and Statement-II are false.  
C. Statement-I is true but Statement-II is false.  
D. Statement-I is false but Statement-II is true.
34. Which of the following options is correct?
- A. 42 and 49 are co-prime numbers.  
B. 376277 is divisible by 3.  
C. LCM of 102, 170 and 136 is 2040.  
D. None of these
35. Read the given paragraph carefully and answer the following questions.
- There is a society of 156 people. In the society, the number of females is  $\frac{5}{12}$  of the total number of people and rest are males.
- (i) Find the ratio of number of males to the number of females.
- (ii) If 49 males are married in the society, then find the ratio of number of unmarried males to the total number of people.
- |    | <b>(i)</b> | <b>(ii)</b> |
|----|------------|-------------|
| A. | 8:5        | 8:26        |
| B. | 5:4        | 6:23        |
| C. | 7:5        | 7:26        |
| D. | 8:7        | 5:21        |

## SECTION - B : Science

This section contains **40 multiple choice questions**. Each question has 4 choices (A), (B), (C) and (D) out of which **ONLY ONE** is correct.

36. Two plotting compasses *X* and *Y* are placed near the bar magnet as shown.



The needles of the compasses *X* and *Y* will point in the directions

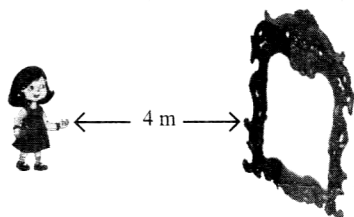
- |    | <i>X</i> | <i>Y</i> |
|----|----------|----------|
| A. | →        | ←        |
| B. | →        | →        |
| C. | ↑        | ↓        |
| D. | ↓        | ↑        |

37. Read the following statements carefully and identify which of them are true (T) or false (F).

- I. The motion of the rider along with the bicycle is rectilinear motion.
- II. The motion of the feet pedalling is always periodic.
- III. The wheel of a moving bicycle shows circular motion only.
- IV. The motion of a potter's wheel is rotatory only.

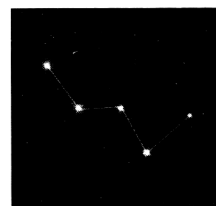
- |    | I | II | III | IV |
|----|---|----|-----|----|
| A. | T | F  | T   | F  |
| B. | T | F  | F   | T  |
| C. | T | T  | T   | T  |
| D. | F | T  | T   | T  |

38. A girl is 4 m away from the plane mirror as shown in the figure. If she moves few steps closer to the mirror, what will happen to the size of image in the mirror? Consider that she can see her complete image in both the cases.



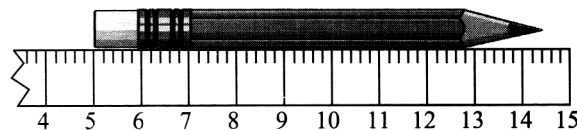
- A. The size of image will decrease.
- B. The size of image will increase.
- C. The size of image will be the same.
- D. The size of image may increase or decrease.

39. The constellation shown in the figure is known as \_\_\_\_\_.



- A. Orion
- B. Scorpius
- C. Cassiopeia
- D. Ursa Minor

40. To measure the length of a pencil by a broken scale, Nisha puts the pencil as shown in the figure.



One end of the pencil reads 5 cm. The other end reads 14.2 cm. The length of the pencil is

- A. 6.4 cm
- B. 7 cm
- C. 8.5 cm
- D. 9.2 cm

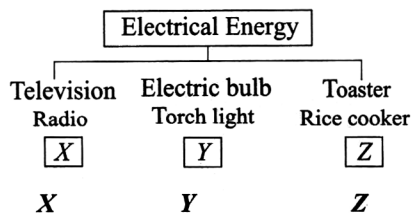
41. Read the given statements regarding friction and select the correct ones.

- (i) Friction may cause moving objects to slow down.
- (ii) A rough surface offers greater friction than a smooth surface.
- (iii) Friction makes it easy to slide heavy objects across the floor.
- (iv) Friction always acts in the opposite direction of motion of objects.

- A. (i), (ii) and (iv) only
- B. (ii) and (iv) only
- C. (i) and (ii) only
- D. (iii) and (iv) only

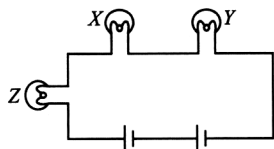
42. Which the following statements is/are correct?
- (i) Planets are not luminous bodies.
  - (ii) The Sun is the nearest star to us from which the Earth receives most of the light.
  - (iii) Glow worm and stars are natural sources of light.
- A. (i) only  
 B. (i), (ii) and (iii)  
 C. (ii) and (iii) only  
 D. (iii) only

43. Study the given classification carefully, and select the correct option for X, Y and Z.



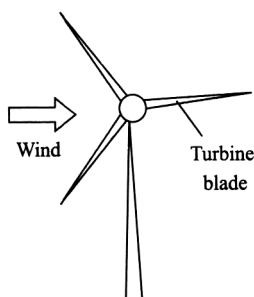
- A. Refrigerator      Clock      Microwave  
 B. Music system      Washing machine      Heater  
 C. Walkman      Table lamp      Electric kettle  
 D. Air conditioner      Heater      Hair dryer

44. Three identical bulbs X, Y and Z are connected as shown in the figure.

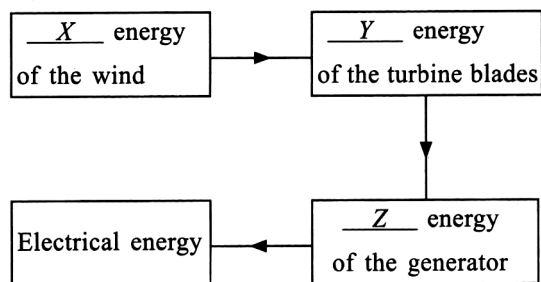


Which of the following statements is incorrect regarding them?

- A. All the three bulbs are in series combination.  
 B. If bulb Z is removed, then bulb X will glow brighter.  
 C. If bulb Z is removed, then bulb X and Y will not glow.  
 D. The given circuit is a closed circuit.
45. The given figure shows a wind turbine used to produce electricity.



Complete the block diagram given below by selecting the most appropriate option to show the energy transformations.



- |    |            |            |            |
|----|------------|------------|------------|
|    | X          | Y          | Z          |
| A. | Kinetic    | Rotational | Mechanical |
| B. | Kinetic    | Mechanical | Rotational |
| C. | Rotational | Kinetic    | Mechanical |
| D. | Rotational | Electrical | Mechanical |

46. Which of the following statements are incorrect?
- I. Wood and plastic sink in water.
  - II. It is difficult to compress a sponge as it is a hard material.
  - III. An iron object gets flattened on hammering.
  - IV. If most of the light passes through a material, it is said to be translucent.
- A. I, II and III only  
 B. II, III and IV only  
 C. II and IV only  
 D. I, II and IV only
47. Which of the following cannot be separated by filtration method?
- A. Tea leaves from tea  
 B. Sawdust and water  
 C. Kerosene and water  
 D. Small pebbles from water
48. Select the group in which the odd one is encircled correctly on the basis of states of matter.
- A. Soft drink, Diesel, Apple juice, Hydrogen  
 B. Stone, Chair, Syrup, Pencil  
 C. Oxygen, Argon, Carbon dioxide, Eraser  
 D. Dry ice, Petrol, Diesel, Kerosene

49. A few mixtures are given below :

- I. Alloys
- II. Oil-water mixture
- III. Air
- IV. Smoke
- V. Solution of sugar in water
- VI. Mist

Which of the following options correctly classifies these mixtures?

Homogeneous	Heterogeneous
-------------	---------------

- |              |                |
|--------------|----------------|
| A. I, IV, V  | II, III, VI    |
| B. IV, VI    | I, II, III, V  |
| C. I, III, V | II, IV, VI     |
| D. II, V     | I, III, IV, VI |

50. Which of the following materials will not sink in water?

- A. Key
- B. Coin
- C. Dry leaf
- D. Iron nail

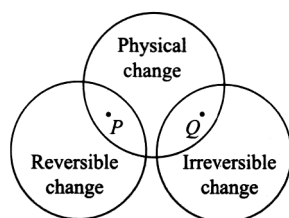
51. Read the given statements and select the correct option.

**Statement 1** : We cannot see clearly through an oiled paper.

**Statement 2** : Oiled paper is a transparent material.

- A. Both statement 1 and statement 2 are true and statement 2 is the correct explanation of statement 1.
- B. Both statement 1 and statement 2 are true but statement 2 is not the correct explanation of statement 1.
- C. Statement 1 is true but statement 2 is false.
- D. Both statement 1 and statement 2 are false.

52. Study the given Venn diagram and select the correct option.



- |                        |                     |
|------------------------|---------------------|
| <b>P</b>               | <b>Q</b>            |
| A. Burning of paper    | Setting of curd     |
| B. Melting of ice      | Shredding of paper  |
| C. Bursting of balloon | Making a paper boat |
| D. Baking of cake      | Glowing of a bulb   |

53. A few characteristics are listed here.

- |                     |                  |
|---------------------|------------------|
| (i) Good conductors | (ii) Transparent |
| (iii) Lustrous      | (iv) Solid       |
| (v) Opaque          | (vi) Insulators  |

The characteristics generally shown by metals are

- A. (i), (iii) and (v) only
- B. (i), (iii), (iv) and (v) only
- C. (ii), (iv) and (v) only
- D. (ii), (iii) and (vi) only.

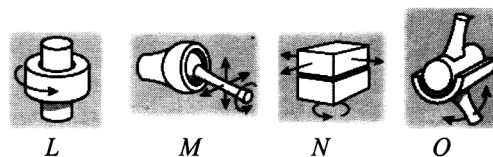
54. Select the correct match among the following.

- A. Conversion of solid into gas - Evaporation
- B. Conversion of solid into liquid - Freezing
- C. Conversion of liquid into gas - Melting
- D. Conversion of gas into liquid - Condensation

55. Select the incorrect match.

- A. Tap root – Bean, Pea
- B. Creeper – Pea, Watermelon
- C. Climber – Grapevine, Money plant
- D. Fibrous root – Wheat, Barley

56. Refer to the given figures and select the correct statement regarding *L*, *M*, *N* and *O*.



- A. Joint *L* is present in knees.
- B. Joint *M* allows movement in all directions and is found in shoulder.
- C. Joint *N* helps us to move our head left and right, up and down.
- D. Joint *O* is present in the wrist and in ankle where two bones glide over each other.

57. Name of few items are given in the following list.

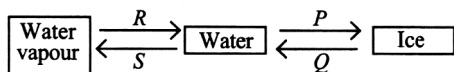
- (i) Fruit peel, (ii) Used batteries, (iii) Juice can,  
 (iv) Tea leaves, (v) DDT, (vi) Used syringes,  
 (vii) Ceramic bowl

Which among them are biodegradable?

- A. (i) and (iv) only
- B. (i), (iv) and (vii) only
- C. (ii), (iii) and (v) only
- D. (ii), (iii), (vi) and (vii) only



58. Study the given diagram carefully and select the option which correctly identifies *P*, *Q*, *R* and *S*.

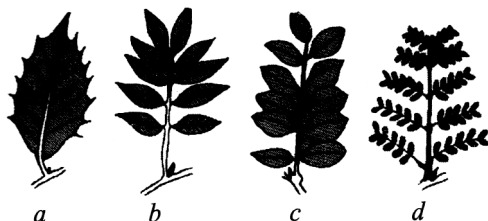


*P*      *Q*      *R*      *S*

- A. Freezing   Melting   Condensation   Evaporation  
 B. Melting   Freezing   Condensation   Evaporation  
 C. Melting   Freezing   Evaporation   Condensation  
 D. Freezing   Melting   Evaporation   Condensation
59. Refer to the given relationship and select the option which correctly satisfies the same relationship.

Beetle : Parakeet : Snail

- A. Ant : Flamingo : Clam  
 B. Porcupine : Penguin : Tortoise  
 C. Butterfly : Rabbit : Spiny anteater  
 D. Snake : Salmon : Sparrow
60. Which of the following measures should be taken in case of a severe burn?
- A. Immerse the burnt part in lukewarm water.  
 B. Prick the blisters if any are formed.  
 C. Dip a sterile piece of cloth in a solution of baking soda and use it as a wet compress.  
 D. None of these
61. Leaves may be simple or compound. Which of the given figures show(s) compound leaves?



- A. *a* only  
 B. *b*, *c* and *d* only  
 C. *a* and *d* only  
 D. *a*, *b*, *c* and *d*
62. Identify plants *P* and *Q* from the given statements and select the correct option.
- P* : Leaves of this plant are modified into tendrils (spring like structures) which coil around a support to help the plant climb upto a certain height.  
*Q* : Leaves of this plant store the extra food prepared by the plant and are mostly eaten as vegetable.
- |               |                    |
|---------------|--------------------|
| <i>P</i>      | <i>Q</i>           |
| A. Sweet pea  | Lettuce            |
| B. Watermelon | <i>Bryophyllum</i> |
| C. Sweet pea  | Lentil             |
| D. Watermelon | Grapevine          |

63. Read the given statements and select the incorrect one.

- A. Qutub Minar is a 73 m high structure having spiral staircase with 379 steps.  
 B. Gateway of India was designed by Persian architect, Ustad Ahmad Lahauri.  
 C. Sun temple is designed in the shape of a chariot of Sun God.  
 D. Taj Mahal is situated on the bank of river Yamuna.

64. 'X' is a phenomenon wherein an organism resembles another organism or some inanimate object to such an extent that they look alike.

Unscramble the given letter groups and select the option that identifies *X*.

- A. I M I M R C Y  
 B. O R M G I T A I N  
 C. C L M O A E F G U A  
 D. U T O N I R I T N

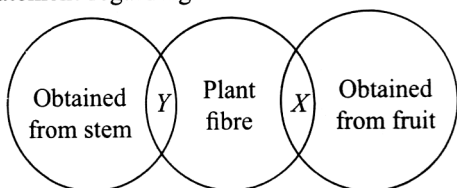
65. Refer to the given figure and identify the disease from which the child is suffering.



Now, select the correct statement regarding it.

- A. The child is suffering mainly from the deficiency of fats.  
 B. Children suffering from this disease also shows symptoms like mental retardation, patches on skin, diarrhoea, etc.  
 C. Diet rich in iron and calcium only can help treat this disease.  
 D. The child is suffering from deficiency of vitamin D.
66. Manisha took some vinegar in a test tube and added some baking soda to it. Then she lit a matchstick and brought it near to the mouth of the test tube. The flame of matchstick got extinguished.
- Which of the following is correct conclusion regarding the given experiment?
- A. Carbon dioxide gas does not support burning.  
 B. Air in the atmosphere contains carbon dioxide.  
 C. Oxygen gas present in the air is necessary for burning.  
 D. Oxygen gas can extinguish fire.

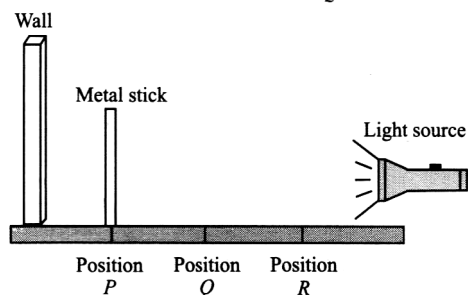
67. Refer to the given Venn diagram and select the correct statement regarding it.



- A.  $X$  could be jute.  
 B.  $Y$  could be linen.  
 C.  $X$  could be acrylic.  
 D. Rayon and nylon could be examples of  $X$  and  $Y$  respectively.
68. The animal shown in the given figure moves with the help of an organ called
- A. Fin  
 B. Gill  
 C. Muscular foot  
 D. Tentacles.
69. Which of the following is/are the effect(s) of drought?
- A. Soil dries up completely, becomes hard and begins to crack and gradually becomes infertile.  
 B. Water table goes down.  
 C. Wells and ponds dry up and it affects the life of plants and animals.  
 D. All of these
70. Refer to the given analogy and select the correct option to fill in the blank.

\_\_\_\_\_ : Smell of burning paper :: Wool : Smell of burning hair

- A. Nylon  
 B. Silk  
 C. Fur  
 D. Cotton
71. A girl wanted to find out how the distance between a light source and an object affects the length of the shadow. She placed the same metal stick at three different positions  $P$ ,  $Q$  and  $R$  as shown in the figure. At these positions she recorded the length (in cm) of the shadow cast on the wall as  $x_P$ ,  $x_Q$  and  $x_R$  respectively.



Select the most appropriate reading from the following options.

	$x_P$	$x_Q$	$x_R$
A.	15	20	25
B.	25	20	15
C.	15	25	20
D.	25	15	20

72. Read the given passage and fill in the blanks by selecting an appropriate option.

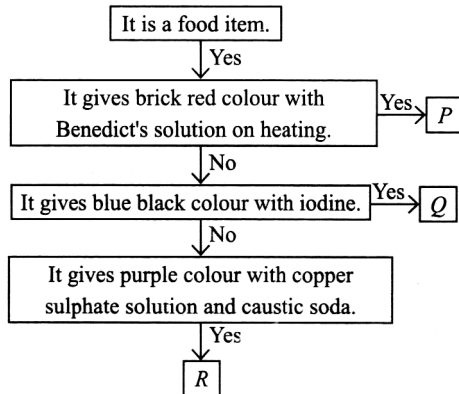
Bran can be separated from flour via (i) process. This is due to the difference in the size of the components. (ii) method is used for the separation of husk particles from seeds of grains. (iii) can be done with the help of bullocks as well as with that of machines when grains are present in larger quantities. (iv) can be used to separate pieces of stone from rice or pulses.

	(i)	(ii)	(iii)	(iv)
A.	Sieving	Winnowing	Threshing	Handpicking
B.	Winnowing	Threshing	Handpicking	Sieving
C.	Handpicking	Sieving	Winnowing	Threshing
D.	Sieving	Threshing	Handpicking	Winnowing

73. Read the given sentences and select the option that correctly fills the blanks in any two of them.

- (i) Roots have a tendency to grow towards gravity, this phenomenon is called \_\_\_\_\_.
- (ii) The changes that take place in the body of an organism over a short period, to overcome problems due to changes in the surrounding is called \_\_\_\_\_.
- (iii) The period of reduced physical activity in animals during winter months is called \_\_\_\_\_.
- A. (i) Negative geotropism, (ii) Camouflage  
 B. (ii) Hibernation, (iii) Camouflage  
 C. (i) Positive phototropism, (ii) Aestivation  
 D. (i) Positive geotropism, (iii) Hibernation

74. Refer to the given flow chart.



Select the option that correctly identifies *P*, *Q* and *R*.

- |    | <i>P</i>    | <i>Q</i>      | <i>R</i> |
|----|-------------|---------------|----------|
| A. | Apple pulp  | Potato        | Egg      |
| B. | Mango juice | Groundnut oil | Butter   |
| C. | Broccoli    | Celery stick  | Rice     |
| D. | Cheese      | Butter        | Tomato   |

75. Read the given paragraph where few words have been italicised.

*Troposphere* is the first layer of atmosphere closest to the Earth. *Mesosphere* is an important layer as it contains ozone gas that absorbs harmful ultraviolet rays of the Sun and protects us from its harmful effects. *Stratosphere* is the layer where most meteorites burn up before reaching the Earth surface. *Thermosphere* is the upper most layer of Earth's atmosphere.

Select the incorrect statement regarding them.

- Troposphere* should not be changed as it is correctly mentioned.
- Mesosphere* and *stratosphere* should be interchanged.
- Thermosphere* should be changed to *exosphere*.
- Thermosphere* and *troposphere* should be interchanged.

Space for rough work

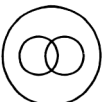

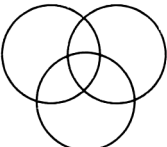
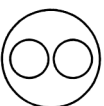
**SECTION - C : Logical Reasoning**

This section contains **25 multiple choice questions**. Each question has 4 choices (A), (B), (C) and (D) out of which **ONLY ONE** is correct.

76. Select the odd one out.

- A. 81
- B. 36
- C. 47
- D. 16

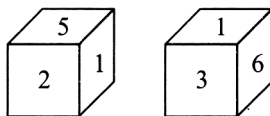
77. Which of the following Venn diagrams best represents the relationship amongst, "Fiction books, Books and Non-fiction books"?

- A. 
- B. 
- C. 
- D. 

78. In a row of 60 students, Amit is at 30<sup>th</sup> position from the left end. What is his position from the right end?

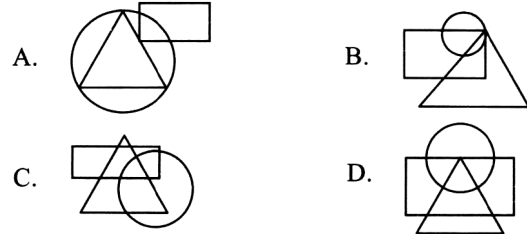
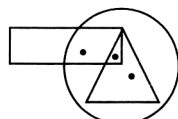
- A. 32<sup>nd</sup>
- B. 31<sup>st</sup>
- C. 29<sup>th</sup>
- D. 33<sup>rd</sup>

79. Two positions of a dice are shown below. Which number will be on the face opposite to the face having number 4?

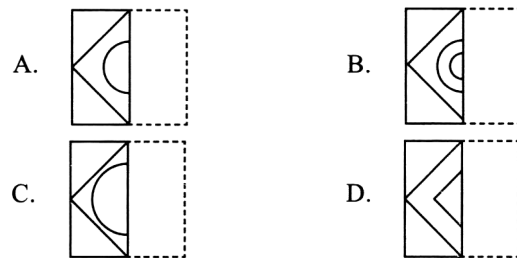
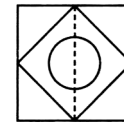


- A. 5
- B. 1
- C. 2
- D. 3

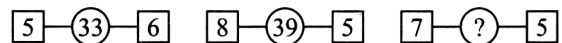
80. Which of the following options satisfies the same conditions of placement of dots as in the given figure?



81. A square transparent sheet with a pattern and a dotted line on it is given. Select a figure from the options as to how the pattern would appear when the transparent sheet is folded along the dotted line.

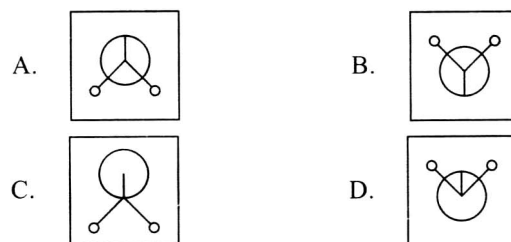
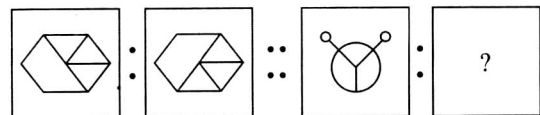


82. Find the missing number, if same rule is followed in all the three figures.



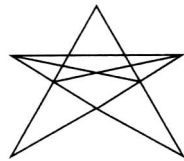
- A. 30
- B. 36
- C. 40
- D. 45

83. There is a certain relationship between the pair of figures on the either side of ::. Identify the relationship of the left pair and find the missing figure.



84. In a certain code language, if GREAT is written as JTFCW, then how will SIGHT be written in the same code language?
- A. VLJKW
  - B. TJHIU
  - C. VKHJW
  - D. RHHGS

85. Find the minimum number of straight lines required to draw the given figure.



- A. 7
  - B. 8
  - C. 9
  - D. 10
86. Select the correct water image of the given combination of letters and numbers.

MaThs2022

- A. M<sup>g</sup>Lp<sup>2</sup>S055
  - B. 55052dTeM
  - C. 2202shTeM
  - D. MaT<sup>p</sup>25022
87. Select a figure from the options which is exactly embedded in the given figure as one of its parts.



- A.
  - B.
  - C.
  - D.
88. If 'L' denotes '×', 'M' denotes '÷', 'N' denotes '-' and 'Q' denotes '+', then find the value of 85 M 17 L 4 Q 18 N 5.
- A. 25
  - B. 28
  - C. 30
  - D. 33

89. How many such pairs of letters are there in the word CREATOR each of which has same number of letters between them as in the English alphabets?
- A. Two
  - B. Three
  - C. Four
  - D. None

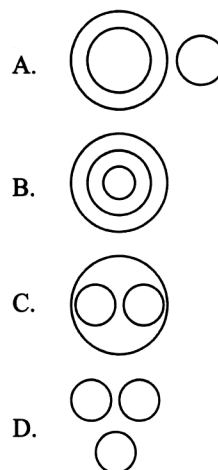
90. Pointing to a girl in the photograph, Arun said, "She is the granddaughter of the elder brother of my father." How is that girl related to Arun?
- A. Sister
  - B. Cousin
  - C. Niece
  - D. Mother

91. Find the missing number to continue the given number pattern.

21, 25, 33, 49, 81, ?

- A. 144
  - B. 133
  - C. 154
  - D. 145
92. In a certain code language, if NOISE is written as PQKUG, then how will PEACE be written in the same code language?
- A. FDBFQ
  - B. ODZBD
  - C. RGCEG
  - D. QFBDF

93. Which of the following Venn diagrams best represents the relationship amongst, "Liquid, Sand and Water"?



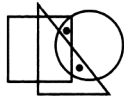
94. Select the odd one out.

- A. RTW
- B. KMP
- C. ACE
- D. QSV

95. If 346 is related to 8 in some way, then in the same way 592 is related to ?.

- A. 4
- B. 7
- C. 10
- D. 6

96. Select a figure from the options which satisfies the same conditions of placement of dots as in the given figure.



- A.
- B.
- C.
- D.

97. If P is the father of Q, Q is the sister of R and R is the daughter of S, then how is S related to P?

- A. Daughter
- B. Sister
- C. Wife
- D. Aunt

98. Arrange the following words in a meaningful sequence and select the correct option.

- |              |             |
|--------------|-------------|
| 1. Word      | 2. Chapter  |
| 3. Book      | 4. Sentence |
| 5. Paragraph |             |
- A. 2, 3, 4, 1, 5
  - B. 3, 2, 5, 4, 1
  - C. 3, 5, 2, 1, 4
  - D. 2, 4, 3, 5, 1

99. If '+' denotes '×', '-' denotes '+', '×' denotes '-' and '÷' denotes '+', then find the value of  $5 + 14 - 2 \times 3$ .

- A. 31
- B. 32
- C. 33
- D. 34

100. Select the correct mirror image of the given word, if mirror is placed vertically to the right.

HINDI

- A. IDNIH
- B. IINDI
- C. IINDI
- D. IDNIH

Space for rough work

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## Our Students Shine in JEE Advanced



**DIVYAMAN PAL**

AIR - 1023

IIT Kanpur, Civil



**SWETA CHANDRA**

AIR - 2352

IIT Kharagpur, Civil



**ANSHUMAN**

AIR - 3359

NIT Patna, C.S



**KUMAR ARPIT**

AIR - 4294

IIT Hyderabad, C.S



**VANSHIKA TULSYAN**

AIR - 5601

IIT Dhanbad

## Our Students Shine in NEET



**PRANSHU PRIYA**

Score: 686 / 720  
IMS BHU, Varanasi



**SHREYANSH JAISWAL**

Score: 670 / 720  
KGMU, Lucknow



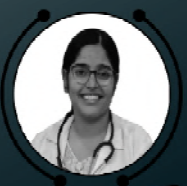
**SAWAI SUTHAR**

Score: 651 / 720  
Rabindranath Tagore  
Medical College, Udaipur



**AAKASH PANDEY**

Score: 640 / 720  
BRD Medical College,  
Gorakhpur



**PRAGATI MISHRA**

Score: 635 / 720  
Govt. Medical College  
Ayudhya



**MANVI VERSHANEY**

Score: 622 / 720  
ASMC, Pratapghar

  
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