Exam Date :.........................

M-STAR ★
Momentum Scholarship Test for Admission & Rewards
8th Edition, 2023-24
Talent HUNT Exam

Class V 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. Which of the following is the equivalent fraction of $\dfrac{3}{8}$?
   A. $\dfrac{9}{18}$
   B. $\dfrac{15}{25}$
   C. $\dfrac{12}{20}$
   D. $\dfrac{12}{32}$

2. The given line graph shows the number of students who like different colours. Study the graph carefully and answer the following question.
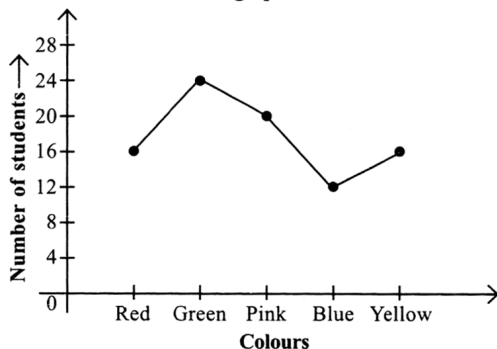
   How many more students like green colour than blue colour?
   A. 14
   B. 12
   C. 10
   D. 8

3. Which of the following is incorrect?
   A. 4 L 360 mL = 4.36 L
   B. 6 m 8 cm = 6.80 m
   C. 7 kg 40 g = 7.040 kg
   D. 8 km 738 m = 8.738 km

4. Find the perimeter of the given figure (not drawn to scale).
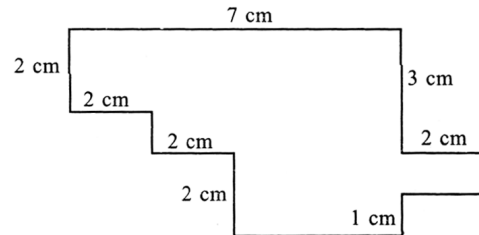
   A. 33 cm
   B. 24 cm
   C. 28 cm
   D. 36 cm

5. Find the greatest 4-digit number that can be formed by using the given digits each only once.
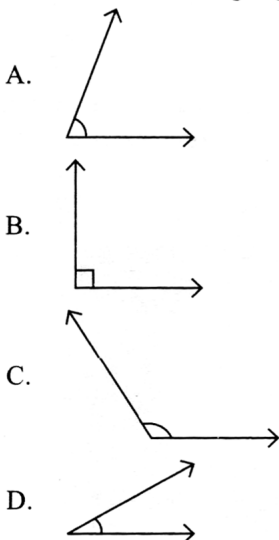
   5, 7, 0, 8

   A. 8507
   B. 8750
   C. 8705
   D. 8570

6. The highest common factor of 56 and 184 is
   A. 8
   B. 12
   C. 7
   D. 16

7. The given clock shows the time at which Shreya went for jogging in the morning from her home. If she came back at 8 : 30 a.m., then for how much time did she jog?

   A. 80 mins
   B. 60 mins
   C. 75 mins
   D. 90 mins

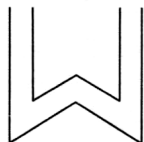**8.** Which of the following angles represents an obtuse angle?

A.

B.

C.

D.

9. Identify the number.
- It is a 3-digit number.
- All of its digits are different.
- The sum of all of its digits is 15.
- The tens digit is three times the ones digit.

A.   651
B.   762
C.   564
D.   726

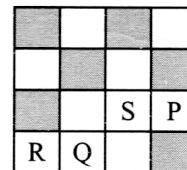**10.** The roman numeral for 967 is _____.

A.   CMLXVII
B.   MCLXVII
C.   CMLXII
D.   MCLXII

11. How many pairs of parallel lines are there in the given figure?

A.   4
B.   8
C.   6
D.   None of these

12. Which of the following squares must be shaded to make the given figure symmetric?
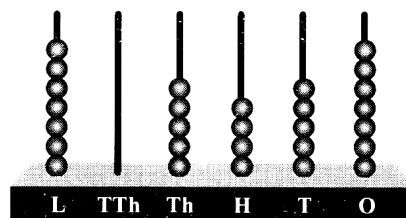
A.   P
B.   Q
C.   R
D.   S

13. A milk container can hold $14\frac{3}{5}$ litres of milk. How much milk 10 such containers can hold?

A.   148 litres
B.   136 litres
C.   146 litres
D.   134 litres

14. The sum of 3rd multiple of 3 and 5th multiple of 5 is divisible by _____.
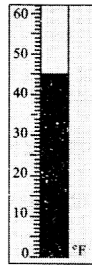
A.   5
B.   3
C.   4
D.   2

15. Rounding off the number shown on the abacus to the nearest hundreds place gives _____.

A.   705000
B.   705400
C.   705500
D.   706000

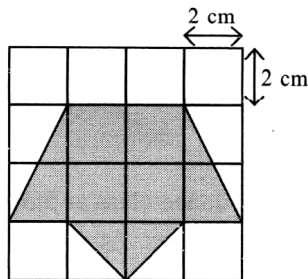**16.** The temperature shown in the given thermometer is

_____.

   A.   45°F

   B.   85°F

   C.   55°F

   D.   105°F

17. What is the value of (825.23 + 425.68) when rounded off to nearest tenths?

   A.   1236.5

   B.   1251

   C.   1250.9

   D.   1252.2

18. Find the area of the shaded figure.

   A.   32 sq. cm

   B.   24 sq. cm

   C.   28 sq. cm

   D.   36 sq. cm

19. A pole is painted red and white. The red portion is 1.8 m long and the white portion is three times as long as the red portion. How long is the pole?

   A.   5.4 m

   B.   7.2 m

   C.   3.6 m

   D.   None of these

20. Sixty million fifty seven thousand four hundred three will be written as _____.

   A.   60,057,403

   B.   60,570,403

   C.   60,574,030

   D.   60,057,430

21. The cost of a notebook is ₹ 12. How many maximum number of notebooks can be purchased with a ₹ 200 note?

   A.   16

   B.   18

   C.   14

   D.   20

22. In a school, the number of girls is $\frac{3}{4}$ of the total students. If total number of students in the school is 320, then find the number of boys in the school.

   A.   160

   B.   90

   C.   80

   D.   120

23. A farmer planted sugarcane in a rectangular plot of 266 sq. m area. If breadth of the plot is 14 m, then find its length.

   A.   23 m

   B.   21 m

   C.   13 m

   D.   19 m

24. A sweet shop sells 248 rasgullas every day. If the cost of 1 rasgulla is ₹ 12, then how much amount will the shop earn in 5 days?

   A.   ₹ 14,880

   B.   ₹ 23,540

   C.   ₹ 12,540

   D.   ₹ 26,320

25. Rehan went for dance class at 5:30 a.m. He returned home after 45 minutes. At what time did he return home?

   A.   5:45 a.m.

   B.   6:15 a.m.

   C.   6:30 a.m.

   D.   6.45 a.m.

26. NGO *P* collected 72,53,052 books and NGO *Q* collected 45,56,759 books at a charity drive. Which NGO collected more number of books?

    A.   NGO *Q*
    B.   NGO *P*
    C.   Both collected equal books
    D.   Can't be determined

27. Karan walks around a square park whose side is 50 m. One day he walked around the park 6 times. How much distance did he walk on that day?

    A.   1450 m
    B.   1500 m
    C.   1800 m
    D.   1200 m

28. Aarohi's weight is 67.50 kg and her friend Shreya's weight is 54.85 kg. How much weight should Aarohi lose so that they both have equal weight?

    A.   17.35 kg
    B.   8.45 kg
    C.   12.65 kg
    D.   21.35 kg

29. Puneet wants to purchase a shirt of ₹ 2000. He has ₹ 760.65 in his digital wallet and received ₹ 432.85 from his friend. How much amount he still needs to purchase the shirt?

    A.   ₹ 806.50
    B.   ₹ 718.75
    C.   ₹ 903.25
    D.   ₹ 684.90

30. A contractor sent 7695940 bricks for the construction of 70 chambers. If an equal number of bricks were required for each chamber, then how many bricks were used for each chamber?

    A.   99762
    B.   148762
    C.   59642
    D.   109942

31. The given bar graph shows the number of marks scored by A and B in four different subjects. Study the graph carefully and answer the following questions.
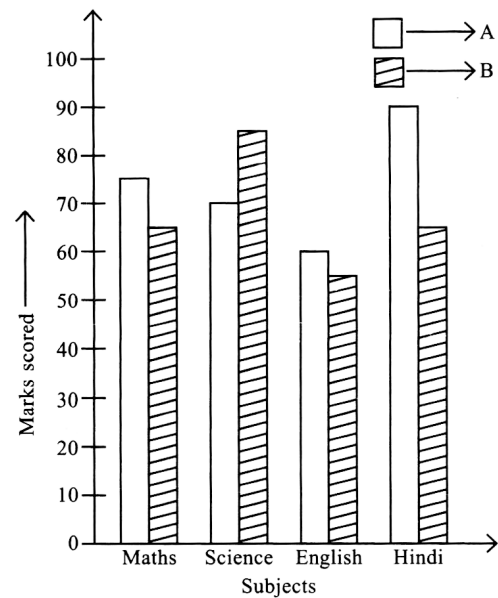
  (i)   How many more marks scored by A than B in all the subjects together?

  (ii)   What is the fraction of marks scored by A in Science and Hindi together to the marks scored by B in English and Maths together?

|	(i)	(ii)		(i)	(ii)
A.	50	$\dfrac{3}{4}$	C.	25	$\dfrac{3}{4}$
B.	25	$\dfrac{4}{3}$	D.	75	$\dfrac{4}{3}$

32. Read the given statements carefully and select the correct option.

Statement-I : The value of (672.734 – 347.487) when rounded to the nearest hundredths gives 325.25.

Statement-II : The value of 63.76 + 38.89 – 13.23 is less than 90.

    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.

33. Some similar square shapes are kept as shown in the figure. If the perimeter of the whole figure is 308 cm, then find the area of the figure.
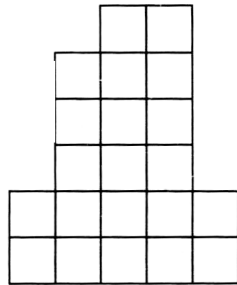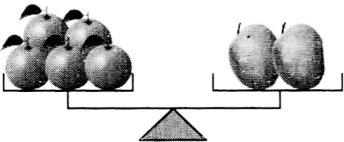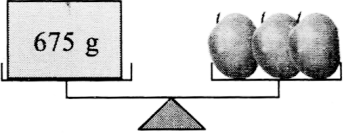

- A. 1686 sq. cm
- B. 4116 sq. cm
- C. 3842 sq. cm
- D. 5964 sq. cm

34. Fill in the blanks and select the correct option.

(i) Least common multiple of 24 and 45 is __P__.

(ii) The value of MXCVIII − CDXLIX is __Q__.

(iii) __R__ must be added in 4,65,893 to get one million.

	(P)	(Q)	(R)
A.	300	528	6,02,301
B.	360	513	6,13,204
C.	180	724	4,78,527
D.	360	649	5,34,107

35. If and , then find the weight of .

- A. 70 g
- B. 95 g
- C. 75 g
- D. 90 g

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.

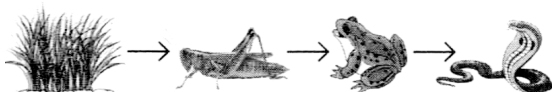**36.** When oxides of nitrogen and sulphur react with water vapour in the air they cause _____.

 A. Ozone depletion

 B. Global warming

 C. Acid rain

 D. Oil spill

37. Identify the labelled parts W-Z in the given diagram of a bird's egg and select the option which shows the embryo.
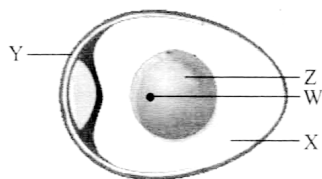
 A. W

 B. X

 C. Y

 D. Z

38. Refer to the given food chain.

If the population of frog is increased, then whose population will decrease?

 A. Grass

 B. Snake

 C. Grasshopper

 D. Both A and B

39. Select the option in which odd one is encircled incorrectly.

 A. (Silk), Rayon, Nylon

 B. Linen, Cotton, (Jute)

 C. Shorts, Frock, (Cardigan)

 D. (Cotton), Wool, Fur

40. Select the option that correctly identifies the components of a glucose solution.

	Solute	Solvent
A.	Water	Glucose
B.	Glucose	Glucose
C.	Glucose	Water
D.	Milk	Sugar

**41.** Which forces will help an archer to aim and hit the arrow on the board?
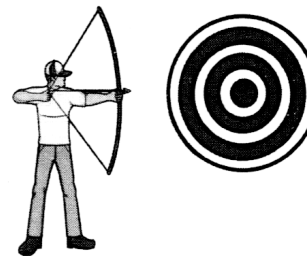
 A. Magnetic and gravitational force

 B. Elastic and Magnetic force

 C. Muscular and elastic force

 D. None of these

42. Select the correct match.

 A. Eid-ul-Fitr – Crescent Moon

 B. Diwali – New Moon

 C. *Karva Chauth* – New Moon

 D. Both A and B

43. Which of the following pairs of liquids are immiscible with each other?

   A.   Water and mango juice

   B.   Water and milk

   C.   Water and vinegar

   D.   Water and refined oil

44. Refer to the given flow chart and select the correct option regarding X, Y and Z.
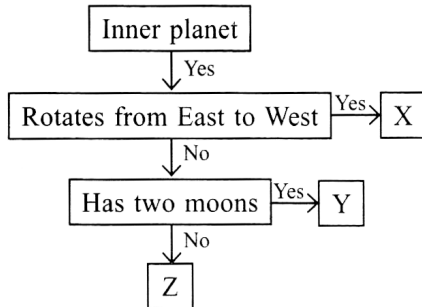

|	X	Y	Z
A.	Budh	Shukra	Prithvi
B.	Shukra	Prithvi	Budh
C.	Budh	Mangal	Prithvi
D.	Shukra	Mangal	Budh

45. Match the columns and select the correct option.

	Column I		Column II
(a)	Electric fan	(i)	Electrical energy into light and sound energy
(b)	Battery	(ii)	Light energy into chemical energy
(c)	Television	(iii)	Electrical energy into mechanical energy
(d)	Photosynthesis	(iv)	Chemical energy into electrical energy

   A.   (a)-(i), (b)-(iii), (c)-(iv), (d)-(ii)

   B.   (a)-(iv), (b)-(ii), (c)-(i), (d)-(iii)

   C.   (a)-(iii), (b)-(iv), (c)-(i), (d)-(ii)

   D.   (a)-(i), (b)-(ii), (c)-(iii), (d)-(iv)

46. Which of the following activities is safe?

A.

B.

C.

D.
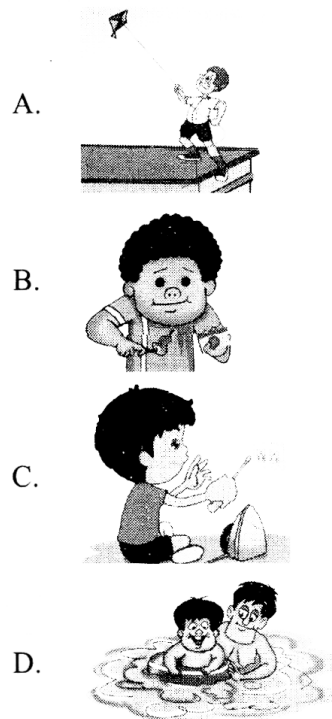
47. Select the odd one out on the basis of body covering.
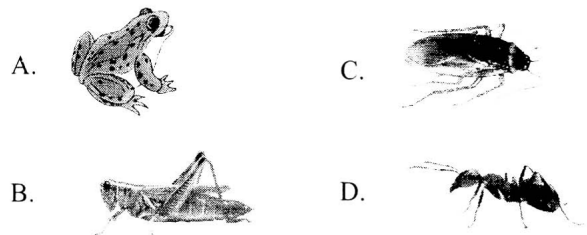
**48.** Select the correct statement.

   A.   Night blindness is caused due to lack of potassium in our diet.

   B.   Digestion of food gets completed in the small intestine.

   C.   There are total 8 molars in the mouth of an adult human.

   D.   Polio is caused by a bacteria.

49. Complete the given analogy and select the option that correctly identifies X.

Floating plant : Duckweed :: Submerged plant : X

A. Water hyacinth

B. Water lily

C. Tape grass

D. *Pistia*

50. The given diagram shows four gears. Ishaan applied a force to make the gear W rotate in a clockwise direction as shown. In which direction will gears X, Y and Z rotate?
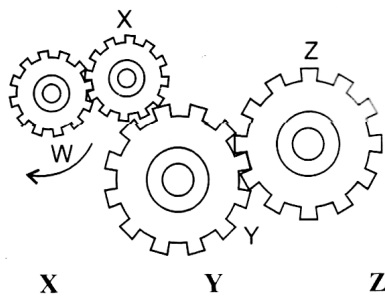
	X	Y	Z
A.	Anti-clockwise	Anti-clockwise	Clockwise
B.	Anti-clockwise	Clockwise	Anti-clockwise
C.	Clockwise	Anti-clockwise	Clockwise
D.	Clockwise	Anti-clockwise	Anti-clockwise

51. Study the given table.

Material	Waterproof	Conducts heat	Elastic
P	✓	✗	✓
Q	✓	✓	✗
R	✗	✗	✗

Select the option that correctly identifies any two of them.

A. P – Rubber,   R – Copper

B. Q – Aluminium,   R – Wood

C. P – Wood,   Q – Iron

D. Q – Iron,   R – Glass

52. The dance form shown in the given picture belongs to _____.

A. Karnataka

B. Mizoram

C. Gujarat

D. Kerala

53. Read the given statement and select the option which on unscrambling correctly identifies X.

X is the part of the leaf that attaches it to the stem.

A. PAXE

B. LTSAK

C. IRIMDB

D. LABED

54. Read the given statements regarding **different human body** parts and select the incorrect one.

A. Cornea is a layer of light sensitive receptors and it sends messages to the brain through optic nerve.

B. Cerebrum is the largest part of the brain.

C. Midbrain, pons and medulla are parts of the brainstem.

D. Outer ear collects sound and directs it to the eardrum.

55. Select the option that correctly shows the journey of food inside the digestive system.

A. Mouth → Stomach → Oesophagus → Small intestine → Large intestine → Anus

B. Mouth → Oesophagus → Stomach → Liver → Small intestine → Anus

C. Mouth → Stomach → Large intestine → Gall bladder → Pancreas → Anus

D. Mouth → Oesophagus → Stomach → Small intestine → Large intestine → Anus

56. Select the option in which one rabi and one kharif crop is paired correctly.

A.　Gram : Mustard

B.　Wheat : Soybean

C.　Rice : Maize

D.　Soybean : Groundnut

57. Which of the following statements are correct regarding pelican?

(i)　It lays eggs.

(ii)　It has a beak.

(iii)　Its body is covered only with scales.

(iv)　It has webbed feet that help it to swim.

A.　(iii) and (iv) only

B.　(ii), (iii) and (iv) only

C.　(i), (ii) and (iv) only

D.　(i), (ii), (iii) and (iv)

58. How are the roots of the sweet potato useful to the plant?

(i)　They give colour to the plant.

(ii)　They help to store food for the plant.

(iii)　They absorb water and mineral salts.

(iv)　They transport water and mineral salts to the leaves only.

A.　(ii) and (iii) only

B.　(ii), (iii) and (iv) only

C.　(i) and (iv) only

D.　(i), (ii), (iii) and (iv)

59. Which of the following is shown by the given road sign?
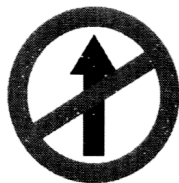
A.　No entry

B.　No U-turn

C.　No parking

D.　One way road

60. Select the correct match.

Indian classical dance form		Place of origin
A.	Bharatanatyam	–	Tamil Nadu
B.	Kuchipudi	–	Madhya Pradesh
C.	Kathakali	–	Odisha
D.	Odissi	–	Kerala

61. Which of the following layers of soil is rich in humus?

A.　Top soil

B.　Subsoil

C.　Bedrock

D.　C horizon

62. Settling of heavy impurities at the bottom of a vessel is called _____.

A.　Filtration

B.　Condensation

C.　Sedimentation

D.　Evaporation

63. Which among the following organisations is/are involved in disaster management?

A.　National Cadet Corps (NCC)

B.　World Health Organisation (WHO)

C.　Red Cross Society

D.　All of these

64. Which of the following statements is correct regarding the given figure?
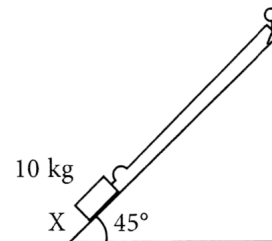

A.　If the inclination is reduced to 30° from 45°, it will become easier to pull or drag the load X along the slope.

B.　If wheels are placed under the load X, it will become easier to pull or push the load X along the slope.

C.   If the inclination is increased from 45° to 50°, it will become difficult to pull or drag the load X along the slope.

D.   All of these

65. When we roll a ball on the ground, it covers some distance and then comes to rest after some time. Which of the following forces is responsible for this?

A.   Gravitational force

B.   Frictional force

C.   Muscular force

D.   Magnetic force

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

Statement 1 : Physical change does not affect the composition of matter.

Statement 2 : Chemical change results in the formation of new substance with different properties.

A.   Both statements 1 and 2 are true and statement 2 is the correct explanation of statement 1.

B.   Both statements 1 and 2 are true but statement 2 is not the correct explanation of statement 1.

C.   Statement 1 is true and statement 2 is false.

D.   Both statements 1 and 2 are false.

67. The angle at which Earth's axis is tilted is _____.

A.   25.3°

B.   23.5°

C.   22.5°

D.   25.5°

68. Select the correct statement.

A.   Solubility of solids in water generally decreases with an increase in temperature.

B.   Solubility of gases in water generally increases with an increase in temperature.

C.   Most of the substances readily dissolve in water, giving it the status of universal solvent.

D.   All of these

69. Look at the given figure. It shows lunar eclipse. Where is the Moon in it?
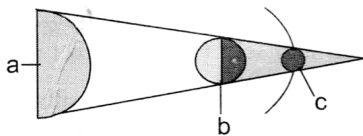
A.   a

B.   b

C.   c

D.   None of these

70. Select the odd one out on the basis of rabi and kharif crops.

A.   Gram

B.   Soybean

C.   Groundnut

D.   Maize

71. Four objects (P, Q, R and S) of same volume but different masses are put on a beam balance in different combinations. Select the option that arranges them in the ascending order of their masses.
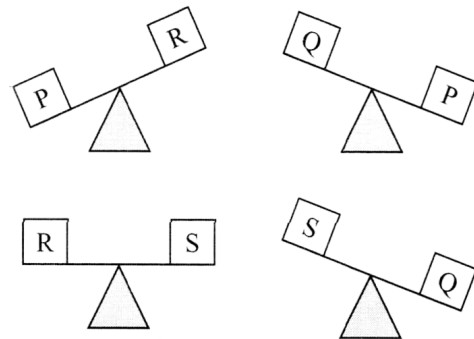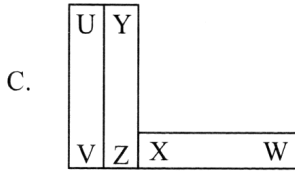

A.   R = S < Q < P

B.   P < Q < R = S

C.   P < R = S < Q

D.   None of these

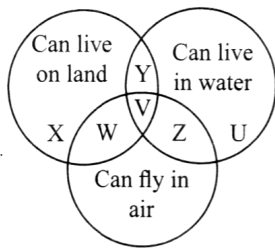**72.** Javed arranged three bar magnets as shown in the given figure.

U	V
W	X
Y	Z
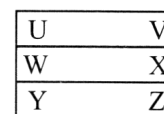
Which one of the following is another possible arrangement of these bar magnets?

C.

```
U Y
V Z X     W
```

D.

```
W       X Y
        Z U     V
```
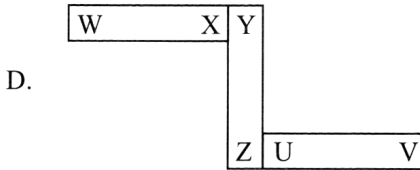
73. Refer to the given Venn diagram.

Which alphabet correctly identifies newt and spiny anteater?

	Newt	Spiny anteater
A.	W	U
B.	X	V
C.	Y	X
D.	Z	W

74. Read the given statements and select the option that correctly identifies the incorrect one(s).

(i) Earthquake of magnitude 7 on the Richter scale can cause massive damage.

(ii) Terrace farming is done in desert areas to prevent soil erosion due to air.

(iii) Discharge of hot water from industries into water bodies lowers the oxygen level of water bodies.

(iv) The tropical storms that occur in southern USA are called typhoon.

A. (i) and (iii) only

B. (ii) and (iv) only

C. (i), (ii) and (iii) only

D. (ii) only

75. Which of the following can be found in the given word grid?
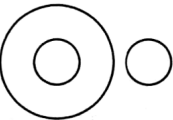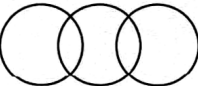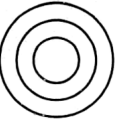
A	S	D	F	G	H	J
K	L	Q	W	E	R	T
Y	U	I	O	P	Z	X
C	R	A	T	E	R	S
B	N	M	C	A	D	H
K	I	C	T	J	W	Q

A. Thickest layer of Earth.

B. Layer of the Sun where nuclear fusion is taking place continuously.

C. Planet that does not have any natural satellite.
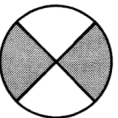
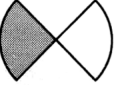D. Huge round depressions present on the surface of Moon.
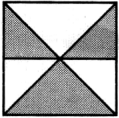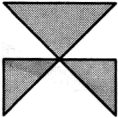
SECTION-C : LOGICAL REASONING

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. Which of the following Venn diagrams best represents the relationship amongst, "Dogs, Men and Living beings"?

A.

B.

C.

D.

77. 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.

A.

B.

C.

D.

78. Find the missing number in the given number pattern.

144, 136, 128, __?__, 112, 104, 96

A. 120   C. 118

B. 122   D. 116
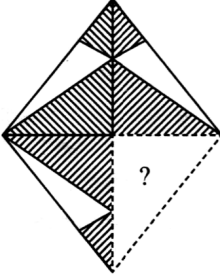
79. Rohan is standing fourth from the front in a queue. Chintu is standing eighth from the last. If there are only four people standing between Rohan and Chintu, then find the total number of people in the queue.
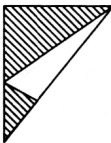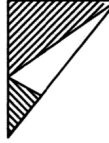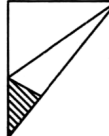
A. 15

B. 16

C. 14

D. 12

80. Select the odd one out.

A. JJ20

B. RR36

C. MM26

D. KK24

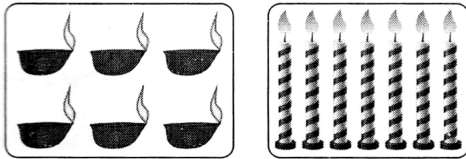**81.** Which of the following options will complete the given figure pattern?

A.   C.

B.   D.

82. In a certain code language, ENGLISH is coded as #$%*!&÷ and BATTING is coded as @©++!$%. How will BANGLE be coded in the same code language?
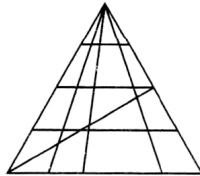
A. @©$%*#

B. @©!$*#

C. @*+%$!

D. ©@$*%#

83. How many different possible combinations of 1 diya and 1 candle each can be formed from the given diyas and candles?

A. 48

B. 40

C. 42

D. 36

84. How many minimum number of straight lines are required to draw the given figure?


A. 12

B. 10

C. 11

D. 8

85. Yuvraj joins a Badminton coaching centre on 1ˢᵗ April 20XX. If every Thursday and Friday is a holiday, then for how many days did he go for coaching in that month?

APRIL 20XX						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

A. 20

B. 23

C. 21

D. 22

86. If Arjun is facing the India Gate, then what will he be facing if he turns 135° anti-clockwise and then 180° clockwise?
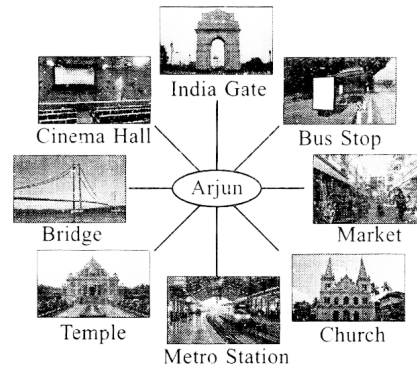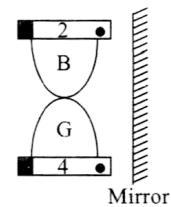

A. Bus Stop

B. Temple

C. Market

D. Bridge

87. Which of the following words cannot be formed from the letters of the given word?
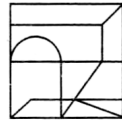
INSTITUTIONAL

A. UNION

B. INSULT

C. NATION

D. TUNNEL

88. Select the correct mirror image of the given figure.

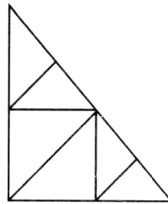**89.** Which of the following options is exactly embedded in the given figure as one of its parts?

A.

C.

B.

D.

90. If the six elements from the left end are removed from the given arrangement, then which element will be at the middle of the remaining elements?

I @ B 7 T # % 4 K M $ E 8 A C

A. M
B. $
C. E
D. 8

91. Find the number of triangles formed in the given figure.

A. 9
B. 10
C. 11
D. None of these

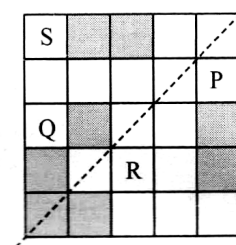**92.** Find the correct water image of the given word.

QUIET

A.

B.

C.

D.

93. Some letters are numbered 1, 2, 3, 4, 5 and 6 as given. Arrange the letters to form a meaningful English word and select the correct option.

E	A	M	G	D	A
1	2	3	4	5	6

A. 5, 2, 3, 4, 1, 6
B. 5, 6, 3, 2, 4, 1
C. 6, 1, 3, 4, 2, 5
D. 2, 1, 3, 5, 6, 4

94. Which of the following squares must be shaded to make the given figure symmetrical along the dotted line?

A. Q   C. S
B. P   D. R

95. Find the missing number which will complete the given number pattern.

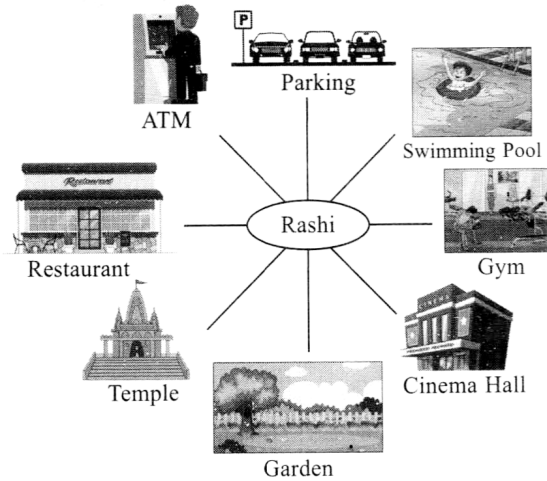9   23   51   107   _?_   443

A. 219
B. 175
C. 231
D. 305

96. Select the odd one out.

A. GHJ
B. KLN
C. TVW
D. MNP

97. In a certain code language, if SMART is coded as MSATR, then how will HORSE be coded in the same code language?
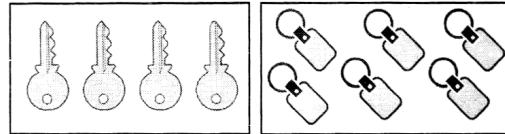
A. RHOES
B. ROHES
C. OHSRE
D. OHRES

98. Rashi is facing the garden. If she turns 45° in anti-clockwise direction and then 270° in the clockwise direction, then what will she be facing?
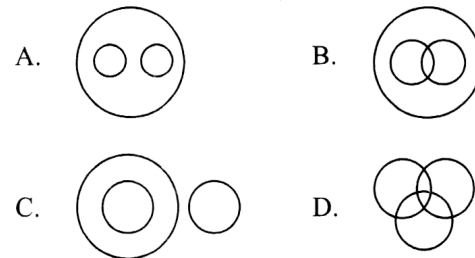

A. Swimming Pool
B. ATM
C. Temple
D. Restaurant

99. How many possible combinations of 1 key and 1 key chain each can be formed from the given keys and key chains?

A. 10
B. 12
C. 18
D. 24

100. Which of the following Venn diagrams best represents the relationship amongst, "Wild animals, Tiger and Wolf "?

A.
B.
C.
D.

MOMENTIAN'S **RESULTS - 2023**

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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