Direction (Q. 1 to $\mathbf{Q . 5 )}$ : Identify the rule which governs the series of numbers/words/alphanumerals. Replace the question mark with the correct option from the given choices.

1. $8,17,36,75,154$ ?
(1) 313
(2) 309
(3) 308
(4) 310
2. $1,5,14,30,55,91$ ?
(1) 140
(2) 110
(3) 120
(4) 111
3. $2,6,24,120,720$ ?
(1) 2160
(2) 1440
(3) 2880
(4) 5040
4. A-2, C-4, E-6, G-3, I-5, ?, M-5, O-9, Q-14
(1) L-10
(2) K-15
(3) K-7
(4) J-15
5. Vishnu, Brahma, Mahesh, Ganesh, ?...
(1) Durga
(2) Saraswati
(3) Laxmi
(4) Krishan

Direction (Q. 6 \& Q.7) : One of the four entries is out of tunc with the rest. Pin point the odd one out.
6.
(1) 4.12
(2) 4.24
(3) 4.40
(4) 4.56
7.
(1) 25
(2) 36
(3) 78
(4) 14

Direction (Q. 8 \& Q.9) : Find the missing term.
8.

| 37 | 75 | 151 |
| :---: | :---: | :---: |
| 70 | 141 | 283 |
| 136 | $?$ | 547 |

(1) 83
(2) 301
(3) 273
(4) 216
9.

(1) $P$
(2) V
(3) C
(4) F

Direction (Q. 10 to $\mathbf{Q . 1 2 ) ~ : ~ I n ~ t h e ~ f o l l o w i n g ~ t h e ~ o u t e r ~}$ number in the triangle is related to the three entries in the inner boxes. Identify that relationship. Now pick up the right choice from the options provided to fill in the blank.
10.

(1) 6
(2) 9
(3) 12
(4) 15
11.

(1) 9
(2) 12
(3) 6
(4) 15
12.

(1) 18
(2) 15
(3) 12
(4) 6

Direction (Q. 13 to Q.16) : Below are given two columns. Entries in the second column form part of set of entries in first column. Decide which entry in the second column matches with which entry in the first column.

## Column-I

## Column-II

13. A B C, B C D, C D E, D E F
(1) N X Z
14. A A B, B B C, C C D, D D E
(2) E E F
15. A D E, C HI, ELM, GPQ
(3) I T U
16. B P R, ERT, H T V, K V X
(4) E F G

Direction (Q. 17 to Q.24) : In questions 23-30 the last two numbers/words/alphabet characters bear the same relationship as the first two. Make selections from the given options so that when the blanks are filled the relationship remains in fact.
17. $3: 8: 5$ : ?
(1) 4
(2) 14
(3) 24
(4) 34
18. $24: 126:: 8$ : ?
(1) 10
(2) 24
(3) 26
(4) 28
19. March is to August as.......is to eight.
(1) three
(2) third
(3) eleven
(4) eighth
20. DhL:cIm :: ? : q U y
(1) P t X
(2) Q u Y
(3) p T x
(4) ptx
21. D E: 45 :: B C : ?
(1) 34
(2) 56
(3) 78
(4) 23
22. ? : M K I G :: ? : O Q S U
(1) F L H J, T R P N
(2) L F H J, N R P T
(3) M J H G, T N O U
(4) L J H F, N P R T
23. $(10,1,16,1,14):$ J AP A N :: ? : C H I N A
(1) $3,9,8,14,1$
(2) $3,8,9,14,1$
(3) $9,3,8,1,14$
(4) $3,9,8,14,1$
24. Sieam Engine : James Watt :: Telephone : ?
(1) Enrico Fermi
(2) Graham Bell
(3) Thomas Alva Edison
(4) C V Raman
25. Ramesh was born on August 11. Arvind is younger than Ramesh by 11 days. This year Independence Day falls on Saturday. On which day will Arvind's birthday fall this year ?
(1) Saturday
(2) Monday
(3) Tuesday
(4) None of the options
26. There is a magical pond is a fairy land where lotuses grow. One fine morning one lotus grew. Second day there ware two lotuses. On the third day there were four loluses. On each following day the number of lotuses become twice. On 30 June 1990 the number of lotuses was two million. On which day was the number one million?
(1) 1-3-1987
(2) 1-4-1989
(3) 1-5-1980
(4) 29-6-1990
27. Sambat ranked $7^{\text {th }}$ from the top and $15^{\text {th }}$ from the bottom among the successful students. If 8 students failed in the examination how many students were there in the class?
(1) 27
(2) 29
(3) 28
(4) 30
28. The product of 924540027 and 43253 is
(1) 3570403787831
(2) 3570403787832
(3) 3570403787833
(4) 3998912978731
29. The following set of three equations are in disguised form. The same relation applies to the fourth equation as well Replace the qustion mark from the four options.
(i) $878=48$
(ii) $887=57$
(iii) $696=48$
(iv) $779=$ ?
(1) 50
(2) 40
(3) 57
(4) 48
30. Five boys participated in a singing competition. Alok was ranked lower than Manish. Amit was ranked higher than Sanjeev and Rajiv was ranked between Alok and Amit. Who was ranked the highest?
(1) Alok
(2) Manish
(3) Amit
(4) Rajeev

Directions (Q. 31 \& 32) : Alphabet characters from A to $G$ have been arranged in a line as detailed below :
(i) D is between A and B .
(ii) C and G have two characters between them.
(iii) F is on the right of C .
(iv) $G$ is between $E$ and $A$.
31. Which letter is the least on the left, and ?
(1) B
(2) F
(3) C
(4) A
32. Which one is exactly in the middle?
(1) C
(2) F
(3) E
(4) G

Directions (Q. 33 to $\mathbf{Q . 3 7 ) ~ : ~ A ~ p o l i c e ~ m a n ~ l e f t ~ h i s ~ p o l i c e ~}$ post and proceed west 4km alter hearing a loud sound from point $A$. On reaching the place, he heard another sound and proceed 6 km to his right to the point B only to find that the sound was coming from his left. From B he proceed to the left to reach the place 4 km away.
33. In which direction was he proceeding to reach the final place of source of sound.
(1) West
(2) East
(3) North
(4) South-East
34. In which direclion he has to go to reach the police post?
(1) North-West
(2) East
(3) Sourth-East
(4) South-West
35. Before reaching point $B$ in which direction was he moving?
(1) West
(2) East
(3) North
(4) South-East
36. What is the line of sight distance between the police post and the point B ?
(1) 7 km
(2) 10 km
(3) 2 km
(4) 6 km
37. A person is to go up a tree 60 ft high. In one second he climbs 5 ft but also slips back 4 ft . How much time in seconds will he take to touch the top of the tree?
(1) 58 s
(2) 59 s
(3) 60 s
(4) 56 s

Directions (Q. 38 to $\mathbf{Q . 4 0 ) ~ : ~ A ~ s m a l l ~ c u b e ~ w i t h ~ a l l ~ t h e ~}$ sides painted was divided into smaller cubes of equal size such that each had size exactly one-fourths of the original one.
38. How many cubes are there with only one side painted?
(1) 0
(2) 2
(3) 3
(4) 4
39. How many cubes are there with only two sides painted?
(1) 0
(2) 2
(3) 3
(4) 4
40. How many cubes are there with only three sides painted?
(1) 24
(2) 16
(3) 8
(4) 4
41. Three cosmopolitan Indian cities, viz., Calcutta, Bombay and Delhi, written in a code are
A. D B M D V U U B
B. $\mathrm{C} P \mathrm{NCBZ}$
C. EFMIJ

How will you write AMRITSAR in this code?
(1) B N S S B T U J
(2) B N S J U T B S
(3) S B T J U B N S
(4) J U B N S S B T
42. A demon imprisoned some riders and horses in a cave. The cave was very low. He could see and count only the number of legs. A clever man some day let them out and instead put 18 bulls inside with exactly same number of legs. How many riders had been imprisoned?
(1) 8
(2) 12
(3) 16
(4) 20
43. Identify the year which is not a leap year.
(This question may have more than one correct. Tick mark all the options.)
(1) 1700
(2) 1800
(3) 1900
(4) 2000
44. If the alphabet is written in the reverse order, which letter would be the $5^{\text {th }}$ to the right of the $15^{\text {th }}$ from the right?
(1) M
(2) N
(3) J
(4) H

Directions (Q. 45 to $\mathbf{Q} .47$ ) : In each of the following questions write which number in sequence replaces the question mark?
45. ?, 17, 33, 51, 75
(1) 9
(2) 13
(3) 8
(4) 11
46. $14,17,24,35$, ?
(1) 49
(2) 38
(3) 50
(4) 46
47. $37,57,81,99$, ?
(1) 118
(2) 119
(3) 135
(4) 137

Directions (Q.48 \& Q.49) : Figure (X) is held vertically on water surface. How will the reflection of the given figure in water look? Select the correct alternative.
48. Question Figure

(1)

(2)

(3)

(4)

49. Question Figure

(1)

(2)

(3)

(4)

50. Shrikant from a certain place went 4 km to East. He turned left and went 1 km . Then he turned right and went 2 km . Again he turned right and walked a distance of 9 km . Then at what distance is he from his original position?
(1) 4 km
(2) 10 km
(3) 9 km
(4) 6 km

Directions(Q. 51 to $\mathbf{Q . 5 3 ) : ~ C h o o s e ~ t h e ~ c o r r e c t ~}$ alternative that will continue the same pattern and replace the question mark in the given series.
51. A, CD, GHI, ?, UVWXY
(1) KLMN
(2) LMNO
(3) MNOP
(4) NOPQ
52. ADVENTURE, DVENTURE, DVENTUR, ?, VENTU
(1) VENTUR
(2) VENTURE
(3) DVENT
(4) DVENTU
53. UPI, ?, ODP, MBQ, IAW
(1) SIJ
(2) SHJ
(3) RHJ
(4) TIJ
54. Which of the following diagrams indicates the relation between Judge, Thieves and Criminals?
(1)

(2)

(3)

(4)

55. Which of the following diagrams indicates the relation between Iron, Lead and Nitrogen?
(1)

(2)

(3)

(4)

56. Which of the following diagrams indicates the relation between Bulb, Lamp and light?
(1)

(2)

(3)

(4)

57. In the following figure, triangle represents 'girls', square, 'players' and circle, 'coach'. Which part of the diagram represents the girls who are players but not coach ?

(1) $P$
(2) Q
(3) R
(4) S
58. The diagram given below represents those students who play Cricket, Football and Kabaddi. Study the diagram and identify the students who play all three games.

(1) $P+Q+R$
(2) $V+T$
(3) $S+T+V$
(4) S

Directions(Q. 59 to Q.62): P, Q, R, S, T, U, V and W are sitting round the circle and are facing the centre:

1. P is second to the right of T who is the neighbour of R and V .
2. $S$ is not the neighbour of $P$.
3. $V$ is the neighbour of $U$.
4. Q is not between S and W , and W is not between U and S .
Answer the questions from the above sitting arrangement.
5. Who two of the following are not neighbours ?
(1) RV
(2) UV
(3) RP
(4) QW
6. Who is immediate right to the V ?
(1) $P$
(2) $U$
(3) R
(4) T
7. Which of the following is correct?
(1) P is to the immediate right of Q
(2) $R$ is between $U$ and $V$
(3) Q is to the immediate left of W
(4) $U$ is netween $W$ and $S$
8. What is the position of $S$ ?
(1) Between U and V
(2) Second to the right of P
(3) To the immediate right of W
(4) Data inadequate

Directions(Q. 63 to Q.66): Five girls are sitting on a bench to be photographed Seema is to the left of Rani and to the right of Bindu, Mary is to the right of Rani. Reeta is between Rani and Mary. Answer the questions from the above sitting arrangement.
63. Who is sitting immediate right to Reeta?
(1) Bindu
(2) Rani
(3) Mary
(4) Seema
64. Who is in the middle of the photograph?
(1) Bindu
(2) Rani
(3) Reeta
(4) Seema
65. Who is second from the right in the photograph ?
(1) Mary
(2) Rani
(3) Reeta
(4) Bindu
66. Who is second from the left in photograph?
(1) Reeta
(2) Mary
(3) Bindu
(4) Seema

Directions(Q. 67 to Q.69): Choose the word which is different from the rest.
67. (1) Producer
(2) Director
(3) Investor
(4) Financer
68. (1) Calendar
(2) Year
(3) Day
(4) Month
69. (1) Mumbai
(2) Cochin
(3) Kandla
(4) Mysore
70. If $\mathrm{A}+\mathrm{B}$ means A is the father of $\mathrm{B} ; \mathrm{A}-\mathrm{B}$ means $A$ is the brother $B ; A \% B$ means $A$ is the wife of $B$ and $A \times B$ means $A$ is the mother of $B$, which of the following shows that M is the maternal grandmother of T?
(1) $\mathrm{M} \times \mathrm{N} \% \mathrm{~S}+\mathrm{T}$
(2) $\mathrm{M} \times \mathrm{N}-\mathrm{S} \% \mathrm{~T}$
(3) $\mathrm{M} \times \mathrm{S}-\mathrm{N} \% \mathrm{~T}$
(4) $\mathrm{M} \times \mathrm{N} \times \mathrm{S} \% \mathrm{~T}$
71. 1. B 5 D means B is the father of D .
2. B9D means $B$ is the sister of $D$.
3. B 4 D means B is the brother of D .
4. B3D means $B$ is the wife of $D$.

Which of the following means $F$ is the mother of $K$ ?
(1) F3M5K
(2) F5M3K
(3) F9M4N3K
(4) F3M5N3K
72. If POND is coded RSTL how is HEAR written in the code ?
(1) GHIJ
(2) JIGZ
(3) GHIZ
(4) None of these
73. If SPIDER is coded as PSDIRE, how is COMMON written in that code?
(1) OCMMNO
(2) OCMMOO
(3) OCMOON
(4) OCMOMN

Directions(Q. 74 to $\mathbf{Q . 7 6 ) : ~ A l l ~ t h e ~ s i x ~ m e m b e r s ~ o f ~ a ~}$ family $A, B, C, D, E \& F$ are staying together. $B$ is the son of $C$ but $C$ is not the mother of $B$. $A \& C$ are married couple. E is the brother of C . D is the daughter of $\mathrm{A} . \mathrm{F}$ is the brother of B .
74. How many male members are there in the family?
(1) 1
(2) 2
(3) 3
(4) 4
75. Who is the mother of $B$ ?
(1) D
(2) F
(3) A
(4) E
76. How many children does $A$ have?
(1) 1
(2) 3
(3) 2
(4) 4
77. Which digit will appear on the face opposite to the face with number 3 ?

(1) 4
(2) 5
(3) 6
(4) 2
78. Which number is on the face opposite to 6 ?

(1) 4
(2) 1
(3) 2
(4) 3
79. Which sign will be opposite to ' + ' ?

(1) $\%$
(2) -
(3) $\times$
(4) $\$$

Directions(Q. 80 to $\mathbf{Q . 8 7 ) : ~ F i n d ~ o u t ~ t h e ~ a l t e r n a t i v e ~ w h i c h ~}$ will replace the question mark.
80. AZBY: CXDW :: EVFU : ?
(1) GTHS
(2) GHTS
(3) GSTH
(4) TGSH
81. ZRYQ : KCJB :: PWOV : ?
(1) GBHA
(2) ISJT
(3) ELDK
(4) EOFP
82. Computer : fqprxvht :: Language : ?
(1) oxpixdig
(2) ocqicyig
(3) ocqixcjg
(4) ocqixcig
83. ACEG : ? :: BDFH : KMOQ
(1) NLPR
(2) LMNO
(3) JLNP
(4) JNLO
84. $\mathrm{M} \times \mathrm{N}: 13 \times 14:: \mathrm{F} \times \mathrm{R}:$ ?
(1) $14 \times 15$
(2) $5 \times 17$
(3) $6 \times 18$
(4) $7 \times 19$
85. Conference : Chairman :: Newspaper:?
(1) Reporter
(2) Distributor
(3) Printer
(4) Editor
86. Problem figures

(1)

(2)

(3)

(4)

87. Problem Figures

(1)

(2)

(3)

(4)

88. Find the number of tirangle in the figure below. Problem figure

(1) 8
(2) 10
(3) 12
(4) 14
89. Find the minimum number of straight lines required to make the given figure.

(1) 16
(2) 17
(3) 18
(4) 19
90. Count the number of squares in the given figure.

(1) 8
(2) 12
(3) 15
(4) 18

Direction (Q.91 \& Q.92) : Find out the alternative figure which contains figure $(\mathrm{x})$ as its part.
91.

(1)

(2)

(3)

(4)

92.

(x)
(1)

(2)

(3)

(4)


Directions(Q.93 \& Q.94): Find out which of the figures (1), (2), (3) and (4) can be formed from the pieces given in figure $(\mathrm{x})$.
93.

(1)

(2)

(3)

(4)

94.

(1)

(2)

(3)

(4)


Directions(Q. 95 to $\mathbf{Q . 9 8 ) : ~ I d e n t i f y ~ t h e ~ f i g u r e ~ t h a t ~}$ completes the pattern (x).
95.

(x)
(1)

(2)

(3)

(4)

96.

(1)

(2)

(3)

(4)

97.

(1)

(2) $\triangle \triangle$
$\triangle \triangle$
(3)

(4)

98.

(1)

(2)

(3)

(4)


Directions(Q. 99 \& Q.100): In these series, there are both letter pattern and number pattern. Fill the blank in series.
99. $Z_{A}, Y_{4} B, X C_{6}, W_{3} D$, ?
(1) $E_{7} V$
(2) $\mathrm{V}_{2} \mathrm{E}$
(3) $\mathrm{VE}_{5}$
(4) $\mathrm{VE}_{7}$
100. DEF, $\mathrm{DEF}_{2}, \mathrm{DE}_{2} \mathrm{~F}_{2}, \mathrm{DE}_{2} \mathrm{~F}_{2}$, ?, $\mathrm{D}_{2} \mathrm{E}_{2} \mathrm{~F}_{3}$
(1) $\mathrm{DEF}_{3}$
(2) $D_{3} E F$
(3) $\mathrm{D}_{2} \mathrm{E}_{3} \mathrm{~F}$
(4) $\mathrm{D}_{2} \mathrm{E}_{2} \mathrm{~F}_{2}$

SPACE FOR ROUGH WORK

