



**ALLENTM NATIONAL TALENT SEARCH EXAMINATION
(NTSE-2020) STAGE -1
STATE : BIHAR PAPER : MAT**

Date: 17/11/2019

Max. Marks: 100

SOLUTIONS

Time allowed: 120 mins

Read the following instructions carefully before you answer the questions. Answers are to be SHADED on a SEPARATE OMR Answer sheet given, with a HB pencil. Read the Instructions printed on the OMR sheet carefully before answering the questions.

Please write you Centre Code No. and Roll no. very clearly (only one digit in one block) on the

Directions : Questions (1 to 10)

In the Number series given below, one Number is missing. Each series is followed by five alternatives (1), (2), (3), (4) and (5). One of them is the right answer. Identify and indicate it as per the "Instructions".

1. What will be the missing alphabet '?' in the figure given below?

E	H	M
B	F	L
I	?	U

- (1) L (2) N (3) A (4) V

Ans. (2)

Sol.
$$\begin{array}{ccc} E & H & M \\ +3 & +5 & \\ B & F & L \\ +4 & +6 & \\ I & N & U \\ +5 & +7 & \end{array}$$

2. Which word cannot be formed from the letters of the word FRAGILE?

- (1) LIFE (2) RAIL (3) EAGLE (4) RACE

Ans. (3&4)

3. A, B, C and D are four relatives. A is thrice as old as B. Age of C is half the age of D and age of B is more than C. Which of the following statement can be assumed true?

- (1) B is older than D (2) A is older than D
(3) May be A is younger than D (4) None of these

Ans. (2)

Sol.

	A	B	C	D
Age	x	y	z	t

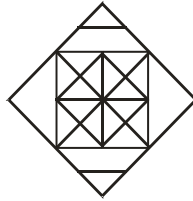
$$x = 3y$$

$$z = \frac{t}{2}$$

$$y > z, t > z, x > y$$

$$x > y > z > t$$

4. How many squares are there in the following figure?



- (1) 16 (2) 18 (3) 14 (4) 15

Ans. (4)

5. If the third day of month is Monday, which one of the following will be the fifth day from 21st of this month ?

- (1) Monday (2) Tuesday (3) Wednesday (4) Thursday

Ans. (3)

- Sol.** 3rd day Ⓐ Monday
 10th day Ⓑ Monday
 17th day Ⓒ Monday
 24th day Ⓓ Monday
 26th day Ⓔ Wednesday

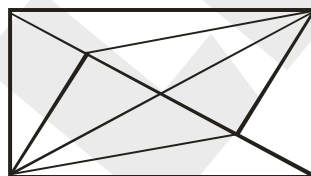
6. If first day of the year 2020 is Wednesday, which one of the following will be the last day of this year ?

- (1) Monday (2) Wednesday (3) Thursday (4) Friday

Ans. (3)

- Sol.** 1-Jan 2020 Ⓐ Wednesday
 1-Jan 2021 Ⓑ Friday
 31-Dec 2020 Ⓒ Thursday

7. How many triangles are there in the figure given below ?



- (1) 8 (2) 16 (3) 20 (4) 22

Ans. (NA)

Sol. Number of triangle is 24

8. Five persons fire bullets at a target at the interval of 6, 7, 8, 9 and 12 seconds respectively. How 000 many times in an hour they would fire the bullets together at the target ?

- (1) 6 (2) 7 (3) 8 (4) 9

Ans. (2)

Sol. L.C.M of 6, 7, 8, 9, 12 is 508 sec.
 The bullet will fire together after every 508 sec.

$$\begin{aligned} \text{In 1 hr No. of time fire together} &= \frac{3600}{504} \\ &= 7.14 \\ &= 7 \text{ time} \end{aligned}$$

9. What will be the missing fraction in the given series ?

$$\frac{4}{9}, \frac{9}{20}, \dots, \frac{39}{86}$$

- (1) $\frac{17}{40}$ (2) $\frac{19}{42}$ (3) $\frac{20}{44}$ (4) $\frac{29}{53}$

Ans. (2)

Sol.

$4 \times 2 + 1 = 9$	$9 \times 2 + 2 = 20$
$9 \times 2 + 1 = 19$	$20 \times 2 + 2 = 42$
$19 \times 2 + 1 = 39$	$42 \times 2 + 2 = 86$

10. The average age of a six member family is 22 years. If the youngest member of the family is 7 years old, then one hour before the birth of this member, what was the average age of the family ?

- (1) 18 years (2) 20 years (3) 16 years (4) 19 years

Ans. (1)

Sol. Sum of age of 6 members = $22 \times 6 = 132$
Sum of age of 5 members excluding younger one = $132 - 7$
= 125
average age of 5 member = $\frac{125}{5} = 25$
average age at the time of birth = $25 - 7$
= 18

Question 11-13 : Certain rules are followed in the given series of alphabets, where some alphabets are missing. Find out the missing alphabet series which is correct from the given alternatives.

11. b _ abbc _ bbca _ bcabb _ ab
(1) acaa (2) acba (3) cabc (4) cacc

Ans. (3)

12. c _ bba _ cab _ ac _ ab _ ac
(1) abc bc (2) acbc b (3) babcc (4) bcacb

Ans. (2)

13. a _ n _ b _ _ ncb _ _ ncb
(1) bcabab (2) bacbab (3) abc bcb (4) abbbcc

Ans. (1)

Question 14-17 :

The opening batsman of Team B who took strike on the first ball managed to face all the deliveries until he got winning runs for his team. the batsman scored his run in sixes and singles only to finish off the match with a win as early as possible. Linke Team A in Team B innings too, there was no extras, overthrows and dot ball.

14. What is the maximum possible score Team A ?

- (1) 242 (2) 423 (3) 420 (4) 404

Ans. (2)

Sol. Per over run = 21

$$\begin{aligned} \text{Total run} &= 21 \times 19 + 24 \text{ (in 19 over + 4 ball)} \\ &= 423 \end{aligned}$$

15. How many balls were left in the innings when Team B won ?

- (1) 36 (2) 37 (3) 38 (4) 39

Ans. (3)

Sol. Total run to chase

$$\begin{aligned} &= 423 \\ &= 31 \times 13 + \underline{6+6+6+6} \text{ (per over run = 31)} \end{aligned}$$

4 ball of 14th over

$$= 403 + 24$$

$$= 427$$

Remaining = 6 over + 2 balls

Total = 38 balls

16. How many runs were required to win the match on the ball on which team B batsman finished off the match with a sixer to win ?

- (1) 1 (2) 2 (3) 3 (4) 4

Ans. (3)

Sol. $31 \times 13 + 6 + 6 + 6 = 421$

$$\begin{aligned} \text{run need on last ball} &= (423 - 421) + 1 \\ &= 3 \end{aligned}$$

17. How many sixes were scored by the team B batsman ?

- (1) 67 (2) 68 (3) 69 (4) 70

Ans. (3)

Sol. No. of sixes = $13 \times 5 + 4$

$$= 69$$

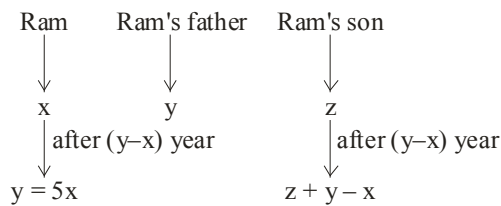
Questions 18-20 : When Ram will be as old as Ram's father is now, Ram will be five times as old as Ram's son is now. But at that time Ram's son will be eight years older than Ram is now. At present, the sum of the ages of Ram's father and Ram is 100 years.

18. How old is Ram's son now ?

- (1) 8 years (2) 13 years (3) 16 years (4) 19 years

Ans. (2)

Sol.



$$x + y = 100 \quad \dots\dots(i)$$

$$z + y - x = x + 8$$

$$\frac{y}{5} + y - z = z + 8$$

$$y + 5y - 5x = 5x + 40$$

$$-10x + 6y = 40$$

$$5x - 3y = -20 \quad \dots\dots(ii)$$

$$\underline{-5x + 5y = 500}$$

$$-8y = -520$$

$$y = 65$$

$$x = 35$$

$$z = 13$$

19. How old would Ram have been 5 years ago ?

- (1) 30 years (2) 33 years (3) 35 years (4) 38 years

Ans. (1)

Sol. Ram age 5 year ago = 35 - 5

20. After 10 years, how old will Ram's father be ?

- (1) 56 years (2) 65 years (3) 75 years (4) 66 years

Ans. (3)

Sol. Ram's father age after 10 year = 65 + 10 = 75

Questions 21-25 : Read carefully the information given below and answer questions

Eight person A, B, C, D, E, F, G and H are seated in a line and all of them are facing North, not necessarily in the same order. Each one of the above person lives in different floor of a eight floor building (e.g.- 1, 2, 3, 4, 5, 6, 7 and 8) not necessarily in the same order.

The person living on the 3rd floor is sitting on the second place towards right of the person living on 2nd floor. C lives on 5th floor, A is sitting on the fourth place towards left of the person living on 8th floor. D is not sitting on either side of H. Neither A nor the person living on 8th floor are sitting on the extreme ends of the line, B is sitting on the third place towards left of F. There is only one person sitting between G who lives on 1st floor and the person living on 8th floor. In between G and the person living on 7th floor there are sitting 2 persons. H is sitting just left of the person living on 7th floor. Between H and F, who lives on 6th floor there are two persons sitting.

21. B lives on which floor ?

- (1) 5th (2) 3rd (3) 2nd (4) 7th

Ans. (3)

Sol.

Person	B	D	A	F	G	C	H	E
Room	2	4	3	6	1	5	8	7

22. How many persons are sitting between G and B ?

- (1) 1 (2) 2 (3) 3 (4) 4

Ans. (3)

23. D lives on which floor ?

- (1) 3rd (2) 4th (3) 2nd (4) 7th

Ans. (2)

24. Who is sitting just left of the person living on 7th floor ?

- (1) H (2) F (3) A (4) B

Ans. (1)

25. Who is sitting three places towards right of A?

- (1) B (2) E (3) F (4) C

Ans. (4)

Question 26-30 : Read carefully the information given below and answer the questions –

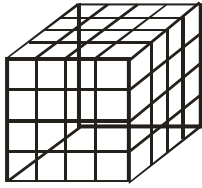
Two opposite surfaces of a 16 cm solid cube is coloured red, other two opposite surfaces is coloured green and the remaining surfaces is coloured with blue. After this the cube is cut into small cubes of size 4 cm each.

26. How many cubes are there whose three surfaces are coloured blue, green and red ?

- (1) 6 (2) 8 (3) 10 (4) 12

Ans. (2)

Sol.



Total no. of small cube = 64

$$n^3 = 64, n = 4$$

number of cube having three side painted = 8

$$\begin{aligned} \text{number of cube having two side painted} &= (n - 2) \times 12 = 24 \\ &= (4 - 2) \times 12 = 24 \end{aligned}$$

$$\begin{aligned} \text{number of cube having one side painted} &= (n - 2)^2 \times 6 \\ &= (4 - 2)^2 \times 6 \\ &= 4 \times 6 = 24 \end{aligned}$$

$$\begin{aligned} \text{number of cube having no side painted} &= (n - 2)^3 \\ &= (4 - 2)^3 = 8 \end{aligned}$$

27. How many cubes are there whose none of the surfaces is coloured ?

- (1) 0 (2) 8 (3) 16 (4) 24

Ans. (2)

28. How many cubes are there whose two surfaces are coloured ?

- (1) 4 (2) 8 (3) 12 (4) 24

Ans. (4)

29. How many cubes are there whose only one surface is coloured ?

- (1) 8 (2) 16 (3) 12 (4) 24

Ans. (4)

30. How many cubes are there whose three surfaces are coloured ?

- (1) 4 (2) 6 (3) 8 (4) 16

Ans. (3)

Questions 31-40 : In the following questions complete the given number series with the most suitable alternative in place of question (?)

31. 2, 10, 30, 68, ?

- (1) 125 (2) 130 (3) 138 (4) 204

Ans. (2)

Sol. $1^3 + 1 = 2$

$$2^3 + 2 = 10$$

$$3^3 + 3 = 30$$

$$4^3 + 4 = 68$$

$$5^3 + 5 = 130$$

32. 392, 252, 150, ?, 36, 12

- (1) 80 (2) 84 (3) 132 (4) 148

Ans. (1)

Sol. $2^2 + 2^3 = 12$

$3^2 + 3^3 = 36$

$4^2 + 4^3 = 80$

$5^2 + 5^3 = 150$

33. 8, 15, 28, 53, ?

- (1) 106 (2) 104 (3) 102 (4) 100

Ans. (3)

Sol. $8 \times 2 - 1 = 15$

$15 \times 2 - 2 = 28$

$28 \times 2 - 3 = 53$

$53 \times 2 - 4 = 102$

34. 12, 36, 132, 348, ?, 1332

- (1) 732 (2) 648 (3) 716 (4) 943

Ans. (1)

Sol.
$$\begin{array}{cccccccc} 12, & 36, & 132, & 348, & ?, & 1332 \\ \hline & +24 & +96 & +216 & +384 & \\ \hline & | & | & | & | & \\ & 2^2 \times 6 & 4^2 \times 6 & 6^2 \times 6 & 8^2 \times 6 & \end{array}$$

$348 + 384 = 732$

35. 128, ?, 82, 62, 44, 28

- (1) 99 (2) 104 (3) 109 (4) 106

Ans. (2)

Sol. $44 - 28 = 16$

$62 - 44 = 18$

$82 - 62 = 20$

$82 + 22 = 104$

36. 2, 3, 6, 15, 42, ?

- (1) 84 (2) 123 (3) 94 (4) 66

Ans. (2)

Sol. $3 - 2 = 1 \rightarrow 3^0$

$6 - 3 = 3 \rightarrow 3^1$

$15 - 6 = 9 \rightarrow 3^2$

$42 - 15 = 27 \rightarrow 3^3$

$42 + 3^4 = 42 + 81$

$= 123$

37. 3, 7, 23, 95, ?
 (1) 575 (2) 479 (3) 128 (4) 62

Ans. (2)

Sol. $3 \times 2 + 1 = 7$
 $7 \times 3 + 2 = 23$
 $23 \times 4 + 3 = 95$
 $95 \times 5 + 4 = 479$

38. 19, 23, 26, 30, 33, ?
 (1) 31 (2) 35 (3) 37 (4) 39

Ans. (3)

Sol. $23 - 19 = 4$
 $26 - 23 = 3$
 $30 - 26 = 4$
 $33 - 30 = 3$
 $33 + 4 = 37$

39. 6, 17, 39, 72, ?
 (1) 94 (2) 127 (3) 83 (4) 116

Ans. (4)

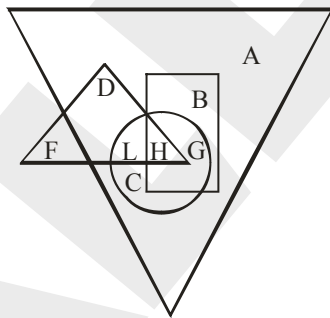
Sol. $17 - 6 = 11$
 $39 - 17 = 22$
 $72 - 39 = 33$
 $72 + 44 = 116$

40. 6000, 5940, 5881, ?
 (1) 5823 (2) 5746 (3) 5854 (4) 5788

Ans. (1)

Sol. $6000 - 5940 = 60$
 $5940 - 5881 = 59$
 $5881 - 58 = 5823$

Questions 41-45 : Study the following figure and answer the questions –



Here –

1. Large triangle ∇ represents artists
2. Small triangle \triangle represents scientists
3. Rectangle \square represents dancers
4. Circle \bigcirc represents doctors

41. Which letter represents artists who are doctor and dancer ?
 (1) H (2) G (3) D (4) A

Ans. (2)

42. Which letters represents those artists who are neither scientist nor doctor ?
 (1) A and B (2) A and L (3) B and G (4) L and H

Ans. (1)

43. Which letters represents those artists who are dancer as well as doctor ?
 (1) A and D (2) G and H (3) C and A (4) C and D

Ans. (2)

44. Which letter represents those artists who are not doctor, not scientist and not dancer ?
 (1) D (2) F (3) A (4) C

Ans. (3)

45. Which letter represents those scientists who are not artists ?
 (1) B (2) D (3) L (4) F

Ans. (4)

Question 46-49 : Consider the following statements :

There are six villages A, B, C, D, E & F.

F is 1 km to the west of D.

B is 1 km to the east of E.

A is 2 km to the north of E.

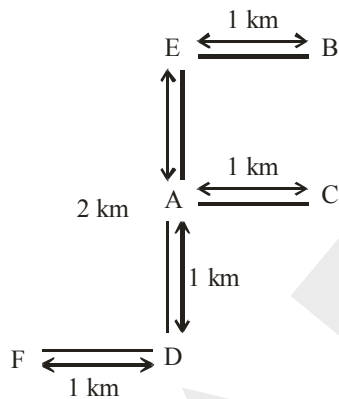
C is 1 km to the east of A.

D is 1 km to the south of A.

46. Which three villagers are in a line ?
 (1) ACB (2) ADE (3) CBF (4) EBD

Ans. (2)

Sol.



47. If “-” means division ‘+’ means multiplication, ‘÷’ means subtraction and ‘x’ means addition, then which of the following equation is correct ?

- (1) $20 + 8 - 7 \div 6 \times 4 = 25$ (2) $20 - 5 \div 4 + 6 \times 5 = 15$
 (3) $20 \times 5 - 6 \div 7 + 4 = 28$ (4) $20 \div 4 - 8 \times 10 + 6 = 36$

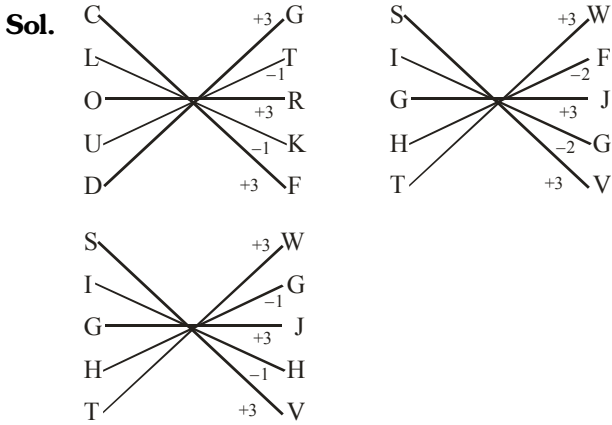
Ans. (2)

Sol. $20 \div 5 \times 4 - 6 + 5$
 $4 \times 4 - 6 + 5$
 $16 - 6 + 5$
 $10 + 5$
 $= 15$

48. In a certain code 'CLOUD' is written as 'GTRKF', then how 'SIGHT' will be written in this code ?

- (1) WGJHV (2) UGHHT (3) UHJFW (4) WFJGV

Ans. (1&4)

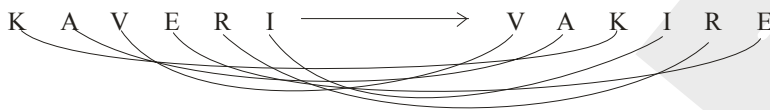


49. In a certain code 'KAVERI' is written as 'VAKIRE', then how 'MYSORE' will be written in this code ?

- (1) SYMEOR (2) SYMROE (3) SYMERO (4) SYMERP

Ans. (3)

Sol.



Questions 50-54 : Complete the given analogy.

50. CE : 70 :: DE : ?

- (1) 90 (2) 60 (3) 120 (4) 210

Ans. (1)

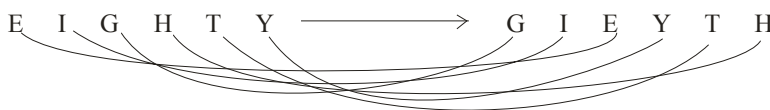
Sol. CE → 35
 $35 \times 2 = 70$
 DE → 45
 $45 \times 2 = 90$

51. EIGHTY : GIEYTH :: OUTPUT : ?

- (1) UTOPTO (2) UOTUPT (3) TUOUTP (4) TUOTUP

Ans. (4)

Sol.

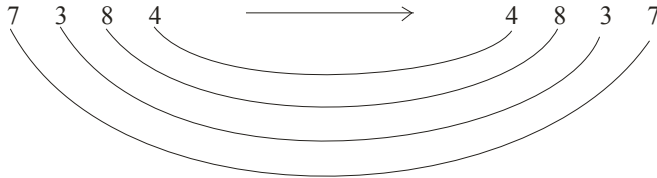


52. 7384 : 4837 : 5291 : ?

- (1) 1924 (2) 1925 (3) 1935 (4) 1915

Ans. (2)

Sol.



53. Arrow : Archer :: Pen : ?

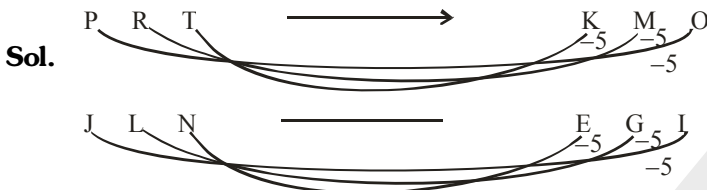
- (1) Author (2) Student (3) Purchase (4) Writing

Ans. (1)

54. PRT : KMO :: JLN : ?

- (1) DFI (2) EGI (3) DFH (4) DGI

Ans. (2)



55. If Rasmesh, while selling two sarees at the same price, makes a profit of 10% on one saree and suffers a loss of 10% on the other then which of the following is true -

- (1) he makes no profit and no loss (2) he makes a profit of 1%
 (3) he suffers a loss of 1% (4) he suffers a loss of 2%

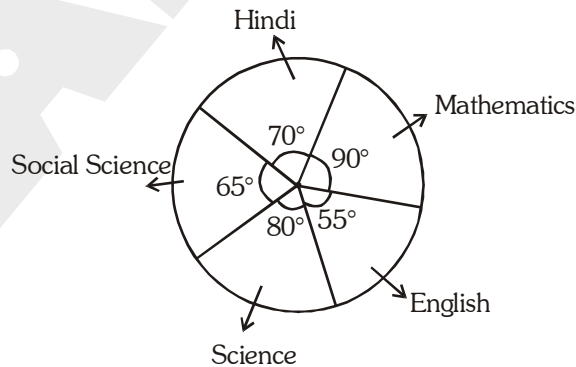
Ans. (3)

Sol. % final loss = $\frac{x^2}{100} = \frac{10^2}{100} = 1\%$

$x = (\% \text{ loss} \times \% \text{ gain}) \times$

Directions : Questions (56 to 60)

The given pie-digram shows the marks scored by a student in different subjects e.g. English, Hindi, Mathematics, Science and Social Science in an examination. Assuming that the total marks for the examination is 540, answer the following questions :



- 56.** The marks scored in Hindi & Mathematics exceed the marks scored in English & Social Science by -
(1) 60 (2) 75 (3) 40 (4) 30

Ans. (1)

Sol. Total marks = 540

$$360^\circ = 540 \text{ marks}$$

$$1^\circ = \frac{540}{360}$$

$$1^\circ = \frac{3}{2} \text{ marks}$$

$$\text{Hindi + Mathematics} = 70^\circ + 90^\circ = 160^\circ$$

$$\text{English + Social Science} = 55^\circ + 65^\circ = 120^\circ$$

$$\text{Difference} = 160^\circ - 120^\circ$$

$$\text{marks} = 40^\circ \times \frac{3}{2} = 60$$

- 57.** The subject in which the student scored 22.2% marks ?

- (1) Hindi (2) Science (3) Social Science (4) English

Ans. (2)

Sol. $360^\circ = 100\%$

$$1^\circ = \frac{100}{360}$$

$$= \left(\frac{10}{36}\right)\%$$

$$\text{Science} = 80$$

$$\% = \frac{80 \times 10}{36} = 22.2\%$$

- 58.** The subject in which the student scored 105 marks is

- (1) Mathematics (2) Science (3) Hindi (4) English

Ans. (3)

Sol. Hindi = $\frac{70^\circ \times 3}{2}$

$$= 105$$

59. The marks obtained in three subjects English, Science and Social Science is what percentage of the total marks?

- (1) 45 (2) $44\frac{4}{9}$ (3) 55 (4) $55\frac{5}{9}$

Ans. (4)

Sol. The mark obtain in three subject = $(55 + 80 + 65) \times \frac{3}{2}$

$$= (120 + 80) \times \frac{3}{2}$$

$$= \frac{200 \times 3}{2} = 300$$

$$\% = \left(\frac{300}{540} \right) \times 100$$

$$= 55\frac{5}{9}$$

60. The marks scored in Mathematics is what percentage of the total marks?

- (1) 20 (2) 30 (3) 35 (4) 25

Ans. (4)

Sol. Mark in mathematics = $\frac{90 \times 3}{2}$

$$= 45 \times 3$$

$$= 135$$

$$\% = \left(\frac{135}{540} \right) \times 100$$

$$= 25\%$$

61. If you write down all numbers from 1 to 100, then how many times do you write 3?

- (1) 11 (2) 18 (3) 20 (4) 21

Ans. (3)

Sol. Option (3)

62. Find out the two signs to be interchanged for making the following equation correct -

$$5 + 3 \times 8 - 12 \div 4 = 3$$

- (1) + and - (2) - and \div (3) + and x (4) + and \div

Ans. (2)

Sol. $5 + 3 \times 8 \div 12 - 4$

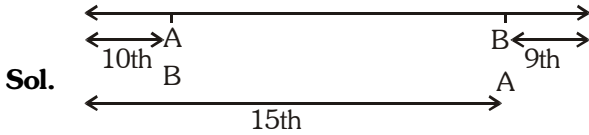
$$= 5 + 2 - 4$$

$$= 7 - 4 = 3$$

63. In a row of boys, if A who is 10th from the left and B who is 9th from the right interchange their positions, A becomes 15th from the left. How many boys are there in the row?

- (1) 23 (2) 31 (3) 27 (4) 28

Ans. (1)



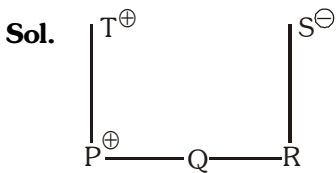
$$T = 15 + 9 - 1$$

$$= 24 - 1 = 23$$

64. P is the brother of Q and R. S is R's mother. T is P's father. Which of the following statements cannot be true?

- (1) T is Q's father (2) S is P's mother (3) P is S's son (4) Q is T's son

Ans. (4)



65. How many 7's immediately preceded by 6 but not immediately followed by 4 are there in the following series?
742764 367535 784376 72406 743

- (1) 1 (one) (2) 2 (two) (3) 4 (four) (4) 6 (six)

Ans. (2)

Sol. Option (2)

66. How many prime numbers are there between 1 to 100?

- (1) 17 (2) 18 (3) 19 (4) 21

Ans. (NA)

Sol. Total number of prime is 25

67. How many digits are there in $6^3 \times 2^{98} \times 5^{99}$?

- (1) 100 (2) 101 (3) 102 (4) 103

Ans. (3)

Sol. $6^3 \times 2^{98} \times 5^{99}$
 $6^3 \times 2^{98} \times 5^{98} \times 5$
 $6^3 \times 5 \times (2 \times 5)^{98}$
 $216 \times 5 \times (10)^{98}$
 $= 1080 \times (10)^{98}$
 No. of digit = 4 + 98
 Total No. of digit = 102

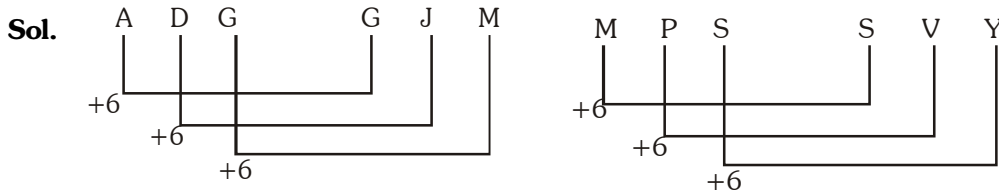
Directions : Questions (68 to 70)

Complete the following alphabetical series.

68. ADG, GJM, MPS, ?

- (1) SVW (2) SVY (3) SUW (4) SWY

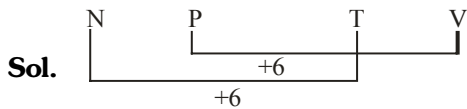
Ans. (2)



69. BD, HJ, NP, ?, ZB

- (1) QS (2) TV (3) YC (4) TU

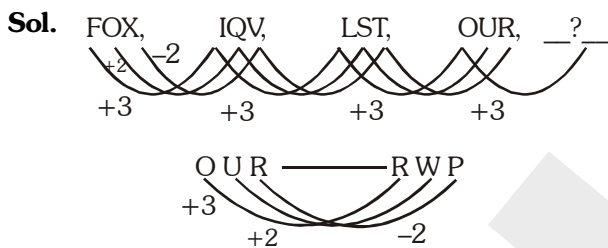
Ans. (2)



70. FOX, IQV, LST, OUR, ?

- (1) RWP (2) RPW (3) QVS (4) SXU

Ans. (1)

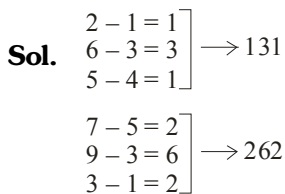


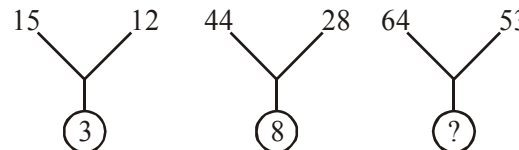
Directions : Questions (71 to 75)

Find the missing number in following :

- 71.**
-
- (1) 320 (2) 274 (3) 262 (4) 132

Ans. (3)

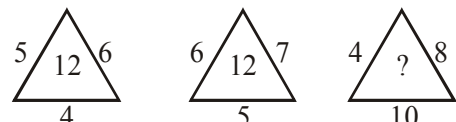


72. 
- (1) 30 (2) 13 (3) 70 (4) 118

Ans. (2)

Sol. $15 + 12 = \frac{27}{9} = 3$

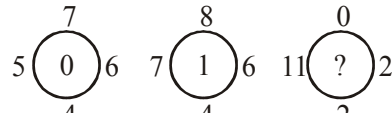
$64 + 53 = \frac{117}{9} = 13$

73. 
- (1) 14 (2) 22 (3) 32 (4) 320

Ans. (3)

Sol. $5 \times 6 \times 4 = \frac{120}{10} = 12$

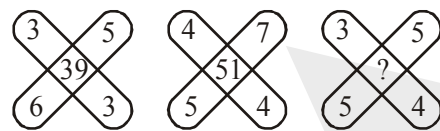
$4 \times 9 \times 10 = \frac{320}{10} = 32$

74. 
- (1) 0 (2) 2 (3) 11 (4) 12

Ans. (3)

Sol. $\begin{matrix} 5 + 6 = 11 \\ 7 + 4 = 11 \end{matrix} \quad \text{---} \quad 11 - 11 = 0$

$\begin{matrix} 11 + 2 = 13 \\ 0 + 2 = 2 \end{matrix} \quad \text{---} \quad 13 - 2 = 11$

75. 
- (1) 47 (2) 45 (3) 37 (4) 35

Ans. (3)

Sol. $3 \times 3 = 9$

$6 \times 5 = 30$

$30 + 9 = 39$

$3 \times 4 = 12$

$5 \times 5 = 25$

$12 + 25 = 37$

76. Arrange the given words in the sequence in which they appear in the dictionary and then choose the correct sequence?

- (1) POWER (2) POWDER (3) POSITION (4) POSTER (5) POSITIVE
 (1) 4, 5, 3, 2, 1 (2) 5, 3, 4, 2, 1 (3) 3, 5, 4, 2, 1 (4) 2, 5, 1, 4, 3

Ans. (3)

Sol. Correct sequence is 3, 5, 4, 2, 1
 Option (3)

Directions : Questions (77 & 78)

Arrange the given words in alphabetical order and choose the one that comes last.

77. (1) Vapour (2) Vaccine (3) Vacuum (4) Valentine

Ans. (1)

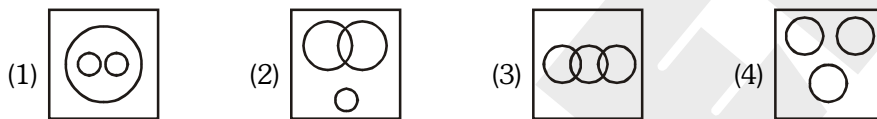
Sol. "Vapour" comes last
 Option (1)

78. (1) Distribute (2) Distrub (3) Distinct (4) Dishonest

Ans. (2)

Sol. "Disturb" comes last
 Option (2)

79. Which one of the following vein diagrams represents the relation among doctor, nurse and human?



Ans. (1)

Sol. Option (1)

80. If Chandra is smaller in height than Rina, Puja is taller than Sita and Sita is taller than Rina. Who among these is smallest in height?

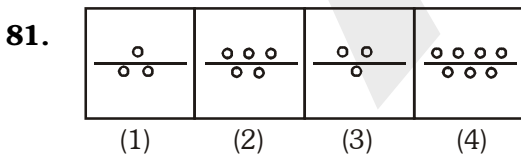
- (1) PUJA (2) RINA (3) SITA (4) CHANDRA

Ans. (4)

Sol. Chandra < Rina < Sita < Puja
 Option (4)

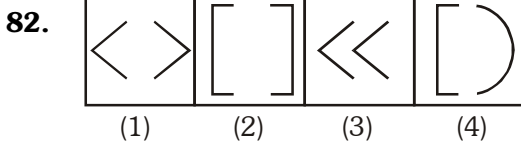
Directions : Questions (81 to 85)

In each of the following sets of figures. Select the one figure that is different from the other figures from the given option.

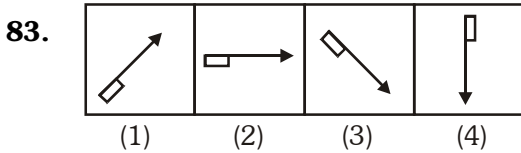


Ans. (1)

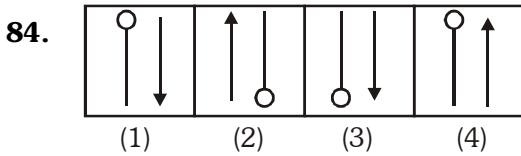
Sol. Option (1)



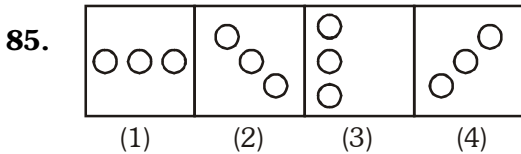
Ans. (4)
Sol. Option (4)



Ans. (4)
Sol. Option (4)



Ans. (2)
Sol. Option (2)



Ans. (3)
Sol. Option (3)

Directions : Questions (86 to 89)

In each of the following questions two statements and two conclusion numbered I and II are given. You have to take the given two statements to be true even if they seem to be at variance from commonly known facts. Read the conclusions and then decide which of the given conclusions logically follows from the two given statements.

86. Statements :

- (I) All dancers are singers.
- (II) All singers are teachers.

Conclusions :

- (I) All dancers are teachers.
- (II) Some singers are dancers.

- (1) Only conclusions I is true
- (2) Only conclusions II is true
- (3) Both Only conclusions I and II are true
- (4) Neither conclusion I nor conclusion II is true

Ans. (3)



Option (3)

87. Statements :

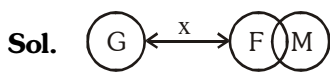
- (I) Some fruits are mangoes
- (II) Some fruits are not guavas

Conclusions :

- (I) All fruits are mangoes
- (II) All mangoes are fruits

- (1) Only conclusions I is true
- (2) Only conclusions II is true
- (3) Both Only conclusions I and II are is true
- (4) Neither conclusion I nor conclusion II is true

Ans. (4)



Option (4)

88. Statements :

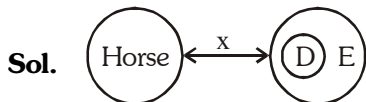
- (I) No Horse is Dog.
- (II) All Dogs are Elephants.

Conclusions :

- (I) No Elephant is Horse.
- (II) Some Elephants are Dogs.

- (1) Only conclusions I is true
- (2) Only conclusions II is true
- (3) Both Only conclusions I and II are is true
- (4) Neither conclusion I nor conclusion II is true

Ans. (2)



Option (2)

89. In the given question choose the correct mirror image from amongst the four alternatives.

PRACTICE

- (1) ECITCARP
- (2) PRACTICE
- (3) PRACTICE
- (4) ECITCARP

Ans. (1)

Sol. ECITCARP

Option (1)

90. In the given question choose the correct water mirror from amongst the four alternatives.

MUMBAI

- (1) MUMBAI
- (2) IVMBUM
- (3) MUMBAI
- (4) IABMUM

Ans. (1)

Sol. MUMBAI

Option (1)

Directions : Questions (91 to 94)

In a village of 450 people, 272 read Hindi Newspaper, 132 read English Newspaper and 200 read Urdu Newspaper, 55 read only Hindi and English Newspaper, 50 read no Newspaper,

Sol. Total persons who read newspaper = $450 - 50$

$$= 400 = (A + B + C + D + E + F + G)$$

$$A + D + G + E = 272$$

$$B + D + G + F = 132$$

$$C + G + E + F = 200$$

$$D = 27$$

$$E = 55$$

$$F = 14$$

$$\text{On adding } A + B + C = 272 + 132 + 200 = 604$$

It includes 27, 55 and 14 two times as the intersection of two newspaper on subtracting

$$\Rightarrow 604 - [(27 + 55 + 14) \times 2]$$

$$\Rightarrow 604 - 192$$

$$\Rightarrow 412$$

As the difference of 412 and 400 is 12.

Also, this 12 includes the persons who read all the three newspaper.

$$\Rightarrow 12 = 3G$$

$$\Rightarrow 4 = G$$

91. How many people read only one newspaper?

- (1) 250 (2) 300 (3) 325 (4) 275

Ans. (2)

Sol. Person who read only newspaper

$$= (A + B + C + E + F + G) - (D + E + F + G)$$

$$= 400 - 100$$

$$= 300$$

Option (2)

92. How many people read atleast two newspapers?

- (1) 96 (2) 98 (3) 102 (4) 100

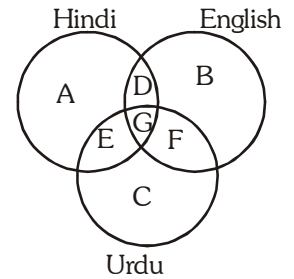
Ans. (4)

Sol. Alleast two newspaper = Person who read 2 newspaper + Person who read 3 newspaper

$$= D + E + F + G$$

$$= 100$$

Option (4)



- 93.** How many people read all the three newspapers?
 (1) 4 (2) 6 (3) 8 (4) 10

Ans. (1)

Sol. Person who read all three newspaper = $G = 4$

Option (1)

- 94.** How many people read only English newspapers?
 (1) 86 (2) 91 (3) 87 (4) 96

Ans. (3)

Sol. Person who read only english
 $= (B + G + D + F) - (D + G + F)$
 $= 132 - 45$
 $= 87$

Option (3)

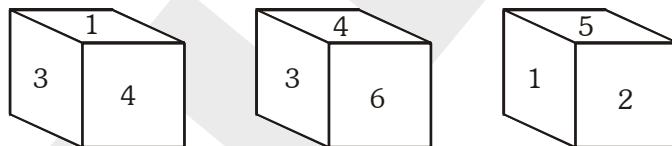
- 95.** Which number is opposite to 4?
 (1) 1 (2) 3 (3) 5 (4) 6

Ans. (3)

Sol. $1 - 4 - 3$ (on moving clockwise from common number)
 $6 - 5 - 2$
 Option (3)

Directions : Questions (95 & 96)

A dice is thrown 3 times and its 3 positions are given in the picture below. Answer the following questions.



- 96.** Which number is opposite to 1?
 (1) 2 (2) 3 (3) 4 (4) 6

Ans. (4)

Sol. Option (4)

- 97.** How many 5's are there in the following sequence which are immediately followed by 3 but not immediately preceded by 7?

4 3 6 5 7 5 3 6 4 5 7 3 5 7 3 5 3

- (1) 0 (2) 1 (3) 2 (4) 3

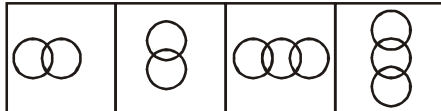
Ans. (2)

Sol. $7 \xleftarrow{x} 5 \xrightarrow{\quad} 3$
 Only (1) pair
 Option (2)

Directions : Questions (98 to 100)

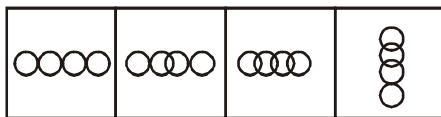
There are two sets of figures. One set contains problem-figures while the other has answer figures. There is a sequence according to which the problem figures are arranged. You have to select an answer figure which can be added in sequence with the problem figures. Choose the correct figures.

98. Problem Figures



(A) (B) (C) (D)

Answer Figures

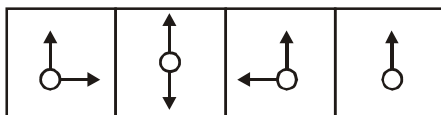


(1) (2) (3) (4)

Ans. (3)

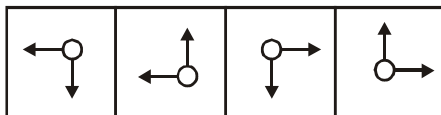
Sol. Option (3)

99. Problem Figures



(A) (B) (C) (D)

Answer Figures

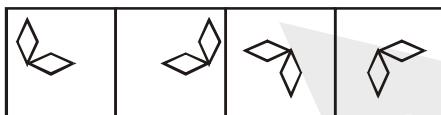


(1) (2) (3) (4)

Ans. (4)

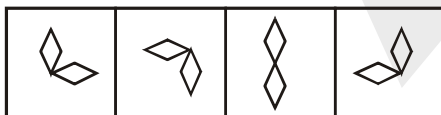
Sol. Option (4)

100. Problem Figures



(A) (B) (C) (D)

Answer Figures



(1) (2) (3) (4)

Ans. (1)

Sol. Option (1)