NATIONAL TALENT SEARCH EXAMINATION (NTSE-2019) STAGE -1
STATE : CHANDIGARH PAPER : MAT

Test Date: 04.11.2018

Max. Marks: 100 **SOLUTIONS** **Time allowed: 120 mins**

1. In a certain code, MENTION is written a LNEIJNO. How is PATTERN Written in that code?

(1) APTTREM (2) PTAETNR (3) OTAETN R (4) OTAETRN

Ans. 3

Sol.

2. In a certain code language, the word NUMBER is written 'SECNVO'. How will the word 'SECOND' be written in that language?

(1) EPOEGH (2) EDOPFT (3) OPETFD (4) TEFDPOE

Ans.

Sol. No option is correct

3. If PAINT is code as 74128 and EXCEL is coded as 93596, then would you code ACCEPT?

(1) 45978 (2) 547978 (3) 554978 (4) 735961

Ans. 1

Sol. PAINT = 74128

EXCEL = 93596

Using direct coding,

ACCEPT = 455978

4. In a certain code, if SCHOOL is coded as 123445, TEAM as 6078, how is HOTEL coded in that code?

(1) 34785 (2) 60734 (3) 43605 (4) 34605

Ans. 4

Sol. SCHOOL = 123445

TEAM = 6078

Using direct coding,

HOTEL = 34605

5. Which number woujd replace question mark in the series 7,12, 19, ?, 39

(1) 29 (2) 28 (3) 26 (4) 24

Ans. 2

Sol. 7, 12, 19, 28, 39
+5 +7 +9 +11

6. Which fraction comes next in the sequence 1/2, 3/4, 5/8, 7/6?

(1) 9/32 (2) 10/17 (3) 11/34 (4) 12/35

Ans. 1

7. Find the missing number in the given series: 9, 11, 20, 31,_82.

(1) 41 (2) 60 (3) 51 (4) 71

Ans. 3

Sol. 9, 11, 20, 31, 51, 82

9 + 11 = 20

11 + 20 = 31

31 + 20 = 51

(Q. 8-10) Direction: - Study the following number series to answer the given question.

2, 6, 7, 5, 4, 3, 7, 4, 8, 9, 4, 8, 9, 4, 3, 2, 5, 4, 7, 9, 8, 6, 8,7, 1, 2, 5, 3, 7, 6, 8, 9, 3, 6

8. How many 7s are there in the series which are immediately precede by an even number and immediately followed by an odd number?

(1) 2 (2) 4 (3) 3 (4) 5

Ans. 3

9. Which of the following will not be number of the series 1, 8, 27, 64,125,....

(1) 256 (2) 512 (3) 729 (4) 1000

Ans. 1

Sol. 1, 8, 27, 64, 125,....

Given is a series of cubes of natural numbers.

256 is not cube of any natural number.

10. How many such number are there in the series which are immediately followed by its multiple?

(1) 3 (2) 4 (3) 5 (4) 1

Ans. 3

11. Which term comes next in the series? YEB, WFD, UHG, SKI,.....

(1) QGL (2) TOL (3) QOL (4) QNL

Ans. 3

Sol. Y E B, W F D, U H G, S K I, Q O L

Triple series

$$\underset{(25)}{Y} \xrightarrow{-2} \underset{(23)}{W} \xrightarrow{-2} \underset{(21)}{U} \xrightarrow{-2} \underset{(19)}{S} \xrightarrow{-2} \underset{(17)}{Q}$$

$$\underset{(5)}{E} \xrightarrow{+1} \underset{(6)}{F} \xrightarrow{+2} \underset{(8)}{H} \xrightarrow{+3} \underset{(11)}{K} \xrightarrow{+4} \underset{(15)}{O}$$

$$\underset{(2)}{B} \xrightarrow{+2} \underset{(4)}{D} \xrightarrow{+3} \underset{(7)}{G} \xrightarrow{+2} \underset{(9)}{I} \xrightarrow{+3} \underset{(12)}{L}$$

12. Pointing towards a person in a photograph, Anjali said, "He is the only son of the father of my sister's brother". How is the person related to Anjali?

(1) Mother (2) Father (3) Maternal Uncle (4) Brother

Ans. 4

Sol. $Father^{+}$

Anjali – $Sister^{-}$ – $Brother^{+}$

'+' stands for males.

'–' stands for females.

13. Pointing out to a lady, Mohit said, "she is the doughter of the woman who is the mother of the husband of my mother". Who is the lady to Mohit?

(1) Aunt (2) Grand Daughter (3) Daughter (4) Sister

Ans. 1

14. A and B are brother C and D are sister. A's son is D's brother. How is B related to C?

(1) Father (2) Brother (3) grandfather (4) Uncle

Ans. 4

Sol. $A^{+} - B^{+}$

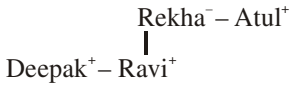
$\boxed{\text{son of } A^{+}} - C^{-} - D^{-}$

15. Deepak is brother of Ravi. Rekha is sister of Atul Ravi is son of Rekha. How is Deepak related to Rekha?

(1) Don (2) Brother (3) Nephew (4) Father

Ans. 1

Sol.

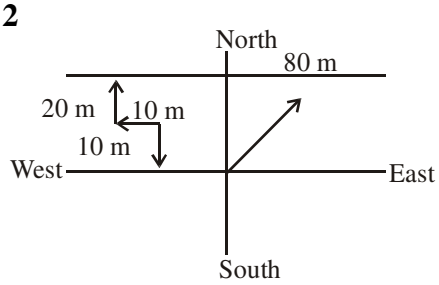


16. I am facing south. I turn right and walk 20 metre. Then I turn right again and walk 10 metre. Then I turn left and walk 10 metre and then turning right walk 20 metre. Then I turn right again and walk 60 metre. In which direction am I from the stertrnf-petnt ?

(1) North-West (2) North-East (3) North (4)West

Ans. 2

Sol.



Directions (17-19): Study the following information carefully and answer the questions given below:

'P$Q' means 'P is father of Q'.

'P+Q' means 'P is son of Q'.

'P@Q' means 'P is sister of Q'.

'P%Q' means 'P is wife of Q'.

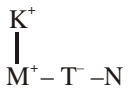
'P&Q' means 'P is husband of Q'.

17. In the expression 'M+K$T@N' how is M related to N?

(1) Sister (2) Cousin (3) Brother (4) Paternal Uncle

Ans. 3

Sol. M + K $ Y @ N

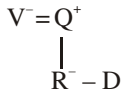


18. Which of the following expression represents the relation V is mother of D?

(1) V%Q@R$D (2) D+T@J$V (3) V%Q$R@D (4) V@F$D%M

Ans. 3

Sol. V % Q $ R @ D



19. In the expression 'E+H@K$B' how is B related to E?

(1) Brother (2) Sister (3) Cousin (4) Can't be determined

Ans. 3

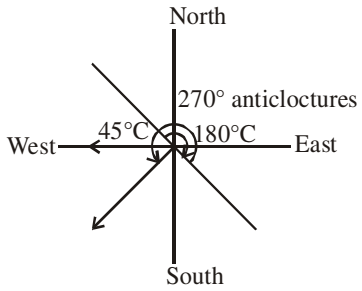
Sol. E + H @ K $ B

20. Rajeev is facing west. He turns 45 degree in the clockwise direction and then another 180 degree in the same direction and then 270 degree in the anticlockwise direction. Find which direction he is facing now?

(1) South (2) West (3) South-West (4) South-East

Ans. 3

Sol.

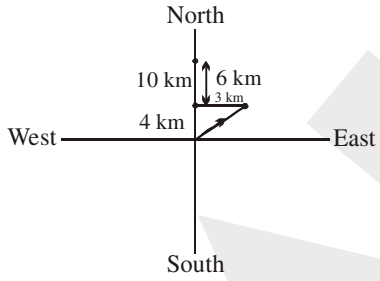


21. Rohir walks 10 km towards North. From there he walks 6 Km towards South. Then, he walks 3 Km towards east. How far and in which direction is he with reference to his starting point?

(1) 3 Km South (2) 4 Km North-East (3) 5 Km South (4) 4 Km East

Ans. (4)

Sol.



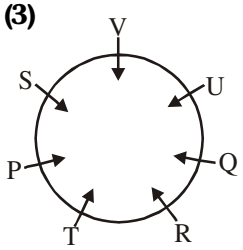
Directions: (22-25) Study the information and answer the questions given: Seven people -P, Q, R, S, T, U and V are sitting in a circle facing the centre. P is between T and S. U is between Q and V. Q is 2nd to the right of T.

22. V is sitting

(1) Between P and U (2) to the immediate left of U (3) 2nd to the left of P (4) 4th to the left of T

Ans. (3)

Sol.



23. Who is sitting in the immediate left of R?

(1) T (2) S (3) U (4) V

Ans. (1)

24. Which pair amongst the following are not immediate neighbours?

(1) TR (2) SP (3) VU (4) SQ

Ans. (4)

Sol.

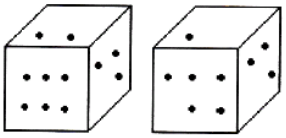
25. What is the position of S with respect to U?

(1) 2nd to the right (2) 3rd to the left (3) Immediate left (4) Immediate right

Ans. **(1)**

Sol.

26. Two positions of dice are shown below. How many points will be on the top when 2 points are at the bottom?



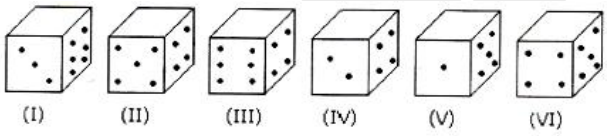
(1) 6 (2) 1 (3) 4 (4) 5

Ans. **(2)**

Sol.

Directions (27-30) Study the information and answer the questions given:

Six dice with upper faces erased are as shows. The sum of the numbers of dots on the opposite face of each dice is 7.



27. If even numbered (ii, iv, vi) dice have even number of dots on their top faces, then what would be the total number of dots on the top faces of their dice?

(1) 12 (2) 14 (3) 24 (4) 18

Ans. **(4)**

Sol. Given dice is standard dice

	Dice 2	Dice 4	Dice 6
Top face	6	6	6

Sum : 6 + 6 + 6 = 18

28. If the odd numbered dice have even number of dots on their top faces, then what would be the total number of dots on the top faces of their dice?

(1) 8 (2) 10 (3) 12 (4) 14

Ans. **(1)**

Sol.

	Dice 1	Dice 3	Dice 5
Top face	2	2	2

2 +2 + 4 = 8

29. If dice (I), (II) and (III) have even number of dots on their bottom faces and the dice (IV), (V) and (VI) have odd number of dots on their top faces, then what would be the difference in the total number of top faces between these two sets?

(1) 2 (2) 4 (3) 6 (4) 0

Ans. (3)

Sol.

	Dice 1	Dice 2	Dice 3
Top face	5	1	5
	Dice 4	Dice 5	Dice 6
Top face	1	3	1

Difference : (5 + 1 + 5) - (1 + 3 + 1)

11 - 5 = 6

30. If the even numbers of dice have odd number of dots on their top faces and odd numbered dice have even of dots on their bottom faces, then what would be the total number of dots on their top faces?

(1)14 (2) 18 (3) 16 (4) 12

Ans. (3)

Sol.

	Dice 1	Dice 2	Dice 3
Top face	5	1	5
	Dice 4	Dice 5	Dice 6
Top face	1	3	1

Total : 5 + 1 + 5 + 1 + 3 + 1

= 16

Directions (31-32) In each question below are given two statements followed by two conclusions numbered I and II. 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 conclusion and then decide which of the given conclusions logically follows from the two given statements, disregarding commonly known facts.

31. **Statements:** All bags are books. All pencils are books.

Conclusions:

I. some pencils are bags.

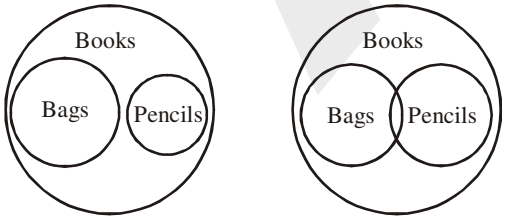
II. No pencil is bag.

(1) Only conclusion I follows (2) Only conclusion II follows

(3) Either I or II follows (4) Neither I nor II follows

Ans. (3)

Sol.



Possible Venn Diagram

32. **Statements:** All mangoes are golden in colour. No golden-coloured things are cheap.

Conclusions:

I. All mangoes are cheap.

II. Golden-coloured mangoes are not cheap.

(1) Only conclusion I follows

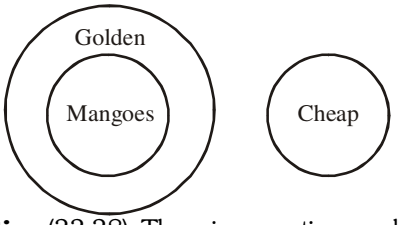
(2) Only conclusion II follows

(3) Either I or II follows

(4) Neither I nor II follows

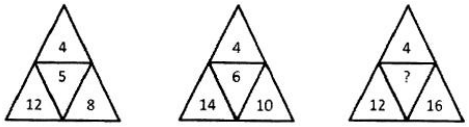
Ans. **(2)**

Sol.



Direction (33-38): There is a question mark in empty cell. Find out the correct alternative?

33.



(1) 7

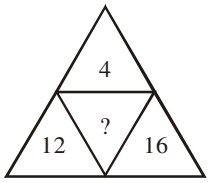
(2) 8

(3) 3

(4) 9

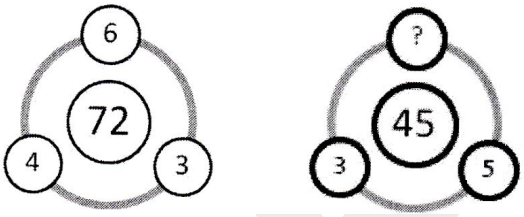
Ans. **(1)**

Sol.



$$\frac{12+16}{4}=\frac{28}{4}=7$$

34.



(1) 2

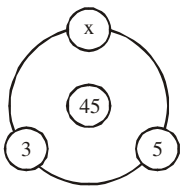
(2) 4

(3) 3

(4) 5

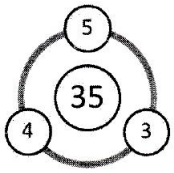
Ans. **(3)**

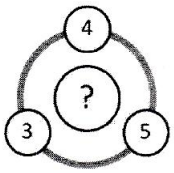
Sol.



$$3\times5\times x=45$$

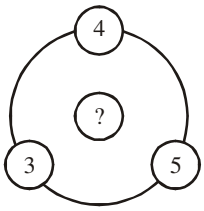
$$x=3$$

35. 



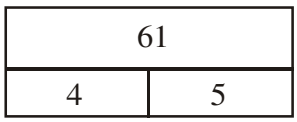
(1) 23 (2) 12 (3) 60 (4) 32

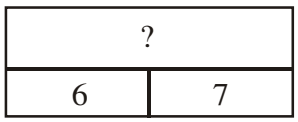
Ans. **(4)**

Sol. 

$3+5=8$

$4\times 8=32$

36. 

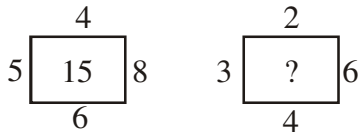


(1) 128 (2) 71 (3) 127 (4) 89

Ans. **(3)**

Sol. $5^3-4^3=61$

$7^3-6^3=127$

37. 

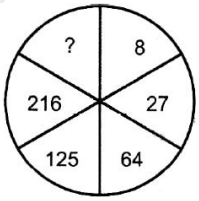
(1) 12 (2) 18 (3) 9 (4) 10

Ans. **(3)**

Sol. $5\times 8=40, 6\times 4=24 \rightarrow 40-24=16-1=15$

$6\times 3=18, 4\times 2=8 \rightarrow 18-8=10-1=9$

38. Find the missing character (?) in the following diagram.



(1) 4 (2) 305 (3) 343 (4) 729

Ans. **(3)**

Sol. 2^3-8

3^3-27

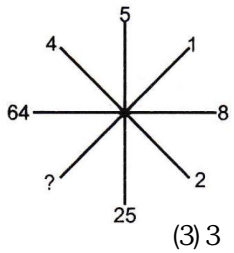
4^3-64

5^3-125

6^3-216

7^3-343

39. Find the missing character (?) in the following diagram.

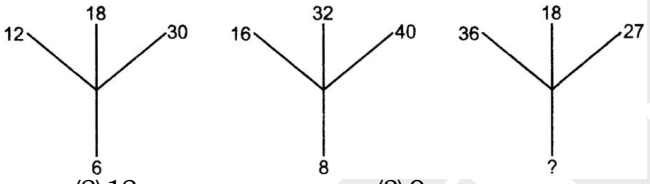


(1) 1 (2) 2 (3) 3 (4) 4

Ans. **(1)**

Sol. 3^3 - 27
4^3 - 64
5^3 - 125
6^3 - 216
7^3 - 343

40. Find the missing character in the following (?) figure such that it follows rule



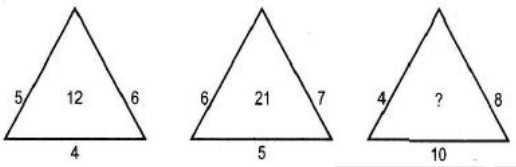
(1) 18 (2) 12 (3) 9 (4) 6

Ans. **(3)**

Sol. (Multiples)

Direction : In questions 41 and 42 select the correct water image of the given figure.

41. Find the missing character (?) in the following figure such that it follows rulein the following

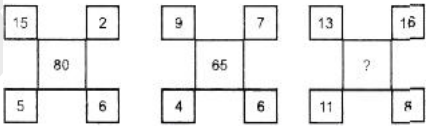


(1) 14 (2) 22 (3) 32 (4) 320

Ans. (3)

Sol. $5 \times 6 \times 4 = 120 \div 10 = 12$
$6 \times 5 \times 7 = 210 \div 10 = 21$
$4 \times 8 \times 10 = 320 \div 10 = 32$

42. **Find the missing character (?) in the following figure such that it follows rule**



(1) 48 (2) 72 (3) 35 (4) 120

Ans. (1)

Sol. (i) $15 - 5 = 10$ (ii) $9 - 4 = 5$ (iii) $13 - 11 = 2$
$6 + 2 = 8$ $7 + 6 = 13$ $16 + 8 = 24$
$10 \times 8 = 80$ $5 \times 13 = 65$ $24 \times 2 = 48$

Direction : Direction (Ques. 43-50) There is a series provided to you where a gap is left. Analyze the series and fill the gap.

43. 5, 8, 28, 162,_____, 12870

(1) 1738 (2) 2318 (3) 1288 (4) 2224

Ans. (3)

Sol. $5 \times 2 - 2 = 8$

$8 \times -4 = 28$

$28 \times 6 - 6 = 162$

$162 \times 8 - 8 = 1280$

44. abb_baa_a_bab_aba

(1) abba (2) abab (3) ccac (4) aabb

Ans. (1)

Sol. ab : b _a_ : ba : a _b_ : a _b_ : ba : b_a_ : aba

Question (45 - 46)

Direction :

45. J99, H63, __, D15, B3

(1) E23 (2) F35 (3) F31 (4) D33

Ans. (2)

Sol. $B(2) + 2 = 4 \rightarrow D$ $2^2 - 1 = 3$

$D(4) + 2 = 6 \rightarrow F$ $4^2 - 1 = 15$

$6^2 - 1 = 35$

46. 0.15, 0.3, _____, 1.2, 2.4

(1) 4.8 (2) 0.006 (3) 0.6 (4) 0.9

Ans. (3)

Sol. $0.15 \times 2 = 0.3$

$0.3 \times 2 = 0.6$

$0.6 \times 2 = 1.2$

$1.2 \times 2 = 2.4$

47. 2,3,5,7,11,_____, 17

(1) 12 (2) 13 (3) 14 (4) 15

Ans. (2)

Sol. 2, 3, 5, 7, 11, 13, 17 series of primes

48. 8,43,11,41,_____, 39,17

(1) 43 (2) 37 (3) 14 (4) 19

Ans. (3)

Sol. Double series

$8 + 3 = 11$ $43 - 2 = 41$

$11 + 3 = 14$ $41 - 2 = 39$

$14 + 3 = 17$

49. 6, 11, 21, 36, 56, _____

(1) 42 (2) 51 (3) 81 (4) 91

Ans. (3)

Sol. $6 + 5 = 11$

$11 + 10 = 21$

$21 + 15 = 36$

$36 + 20 = 56$

$56 + 25 = 81$

50. 210, 209, 213, 186, 202, _____

(1) 77 (2) 177 (3) 138 (4) 200

Ans. (1)

Sol. $210 - 1^3 = 209$

$209 + 2^2 = 213$

$213 - 3^2 = 186$

$186 + 4^2 = 202$

$202 - 5^3 = 177$

Direction (Ques. 51-52) There is a series provided to you where one of the entry is wrong. Analyze the series and find the wrong entry.

51. 2, 12, 38, 80, 150, 252, 392

(1) 392 (2) 2 (3) 38 (4) 150

Ans. (3)

Sol. $1^2 + 1^3 = 2$

$2^2 + 2^3 = 12$

$3^2 + 3^3 = 36$

52. 0, 6, 24, 60, 95, 210, 336

(1) 210 (2) 336 (3) 120 (4) 95

Ans. (4)

Sol. $1^3 - 1 = 0$

$2^3 - 2 = 6$

$3^3 - 3 = 24$

$4^3 - 4 = 60$

$5^3 - 5 = 120$

Directions (Ques. 53-57): In following questions in certain code language if '+' means 'x' '–' means '+', 'x' means '÷' and '÷' means '–'then answer the following questions.

53. $16 + 2 - 3 \div 4 = ?$

(1) 31 (2) 26 (3) 15 (4) None of these

Ans. (1)

Sol. $16 \times 2 + 3 - 4$

$= 32 + 3 - 4 = 35 - 4 = 31$

54. $9 + 3 \div 18 \times 3 + 4 = ? \times$

(1) 30 (2) 3 (3) 13 (4) 0

Ans. **(2)**

Sol. $9 \times 3 - 18 \div 3 \times 4$

$= 9 \times 3 - 6 \times 4$

$= 27 - 24 = 3$

55. $28 \div 36 - 49 \times 7 + 2 = ?$

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

Ans. **(4)**

Sol. $28 - 36 + 49 \div 7 \times 2$

$= 28 - 36 + 7 \times 2$

$= 28 - 36 + 14 = 42 - 36 = 6$

56. $171 \times 57 \div 279 \times 93$

(1) 250 (2) 253 (3) 252 (4) 0

Ans. **(4)**

Sol. $171 \div 57 - 279 \div 93$

$= 3 - 3 = 0$

57. $8 \div 6 - 9 \times 12 + 4$

(1) 5 (2) 7 (3) 9 (4) 13

Ans. **(1)**

Sol. $8 - 6 + 9 \div 12 \times 4$

$= 8 - 6 + \frac{9}{12} \times 4$

$= 8 - 6 + 3 = 11 - 6 = 5$

58. When $12 + 10 = 1205, 11 + 8 = 885, 16 + 15 = ?$

(1) 2405 (2) 105 (3) 1025 (4) 130

Ans. **(1)**

Sol. $12 + 10 \Rightarrow 12 \times 10 = 120 \Rightarrow 120 \times 10 + 5 = 1205$

$11 + 8 \Rightarrow 11 \times 8 = 88 \Rightarrow 88 \times 10 + 5 = 885$

$16 + 15 \Rightarrow 16 \times 15 = 240 \Rightarrow 240 \times 10 + 5 = 2405$

Direction (Ques. 59-60) In these questions, find the missing number in the number pattern.

59. 268 [29] 210

218 [?] 166

(1) 42 (2) 25 (3) 26 (4) 29

Ans. **(3)**

Sol. $268 - 210 = 58 \div 2 = 29$

$218 - 166 = 52 \div 2 = 26$

60.

8	3	21
6	5	25
12	2	?

(1) 24 (2) 19 (3) 22 (4) 20

Ans. (3)

Sol. $8 - 1 = 7 \times 3 = 21$

$6 - 1 = 5 \times 5 = 25$

$12 - 1 = 11 \times 2 = 22$

Direction (Ques. 61-63) : In these questions select the related number from the given options.

61. 9 : 80 : : 100 : ?

(1) 901 (2) 1009 (3) 9889 (4) 9999

Ans. (4)

Sol. $9 : 9^2 - 1 : : 100 : 100^2 - 1 = 9999$

62. 2 : 3 : : 23 ?

(1) 25 (2) 28 (3) 46 (4) 29

Ans. (4)

Sol. 2 : 3 : : : 23 : 29 (Next Prime number)

63. 2 : 12 : : 8 ?

(1) 18 (2) 128 (3 396 (4) 576

Ans. (4), (1) both

Sol. $2 \times 2 \times 2 + 2 \times 2 = 12$.

$8 \times 8 \times 8 + 8 \times 8 = 576$.

or

$2 + 10 = 12, 8 + 10 = 18$

Direction (Ques. 64-68) Study the following inforamtion carefully and answer the questions that follow:

Madhu and Shobha are good in Dramatics and Computer science. Anjali and Madhu are good in Computer Science and Physics. Anjali, Poonam and Nisha are good in physics and History. Nisha and Anjali are good in physics and Mathematics. Poonam and Shobha are good in History and Dramatics

64. Who is good in Computer Science, History and Dramatics?

(1) Anjali (2) Madhu (3) Shobha (4) Nisha

Ans. (3)

Sol.

Subject	Names				
	Nisha	Anjali	Madhu	Shobha	Poonam
Computer Science		√	√	√	
History	√	√		√	√
Dramatics			√	√	√
Physics	√	√	√		√
Mathematics	√	√			

65. Who is good in Physics, Dramatics and Computer science?

(1) Shobha (2) Poonam (3) Madhu (4) Anjali

Ans. (3)

66. Who are good in Physics, History and Dramatics?

(1) Poonam (2) Shobha (3) Madhu (4) Anjali

Ans. (1)

Sol.

67. Who is good in History, Physics, Computer Science and Mathematics?

(1) Poonam (2) Nisha (3) Madhu (4) Anjali

Ans. (4)

68. Who is good in Physics, History, Mathematics but not in Computer Science?

(1) Madhu (2) Poonam (3) Nisha (4) Anjali

Ans. (3)

Direction (Ques. 69-71) : in these question four optaion are given in each question out of which only one is correctly spelt. Find the correctly spelt word.

69. (1) Apparrel (2) Aparell (3) Aparel (4) Apparel

Ans. (4)

70.

(1) Commissioner (2) Commissionar (3) Comissioner (4) Commissioner

Ans. (1)

71.

(1) Etiqute (2) Etiquette (3) Ettiquet (4) Ettiquette

Ans. (2)

72. Which is the following is the same as wrestling, Karate, Boxing?

(1) Swimming (2) Polo (3) Ploe vault (4) Judo

Ans. (4) Type of fighting

73. Which of the following is the same as Canoe, Raft, Wangan?

(1) Dinghy (2) Shallot (3) Canopy (4) Submarine

Ans. (1) all are type of boats

Directions (Ques. 74-78) The numbered cells in the square below have been filled with letters, the columns and the rows are identified by the numbers 0 to 9. A letter in a cell is represented first by its column number and then by its row number e.g. G in column 3 and row 1 is represented by 31. In each of the following questions a word has been given which is represented by one of the four correct alternatives.

	0	1	2	3	4	5	6	7	8	9
0	1	L	B	P	K	N	H	S	A	E
1	M	A	Q	G	T	V	I	O	N	U
2	H	R	W	J	A	X	B	E	C	I
3	T	Y	A	I	U	U	O	N	J	F
4	F	O	B	M	E	G	U	K	W	R
5	A	C	L	J	X	R	A	A	X	T
6	P	S	U	E	Z	K	V	W	D	L
7	Z	D	Y	V	F	O	H	Y	I	O
8	M	I	Z	Q	E	A	U	E	I	S
9	P	E	O	D	E	U	Q	O	C	G

74. MIND

(1) 01, 61, 73,36 (2) 08, 61, 55,44 (3) 34, 33, 50,17 (4) 73, 33, 61, 17

Ans. **(3)**

Sol. M → 34 → Fourth row 3rd column

I → 33 → Third row 3rd column 50m.

75. JAIL

(1) 32,05,25,44 (2) 21, 05, 87,96 (3) 35,23,26,33 (4) 83,65,25,44

Ans. **(2)**

Sol. J → 32 → 2nd row 3rd column

A → 05 → 5th row 6th column 50m.

76. BLOT

(1) 20, 10, 71, 22 (2) 24, 10, 26, 48 (3) 34, 35, 63, 03 (4) 62, 25, 57, 95

Ans. **(4)**

Sol. B → 62 → 2nd row 6th column

L → 25 → 5th row 2nd column 50m .

77. JOKE

(1) 52,14, 56, 44 (2) 35,14, 37, 78 (3) 83,63,40,59 (4) 83,71,25,36

Ans. **(1)**

Sol. J → 32 → 2nd row 3rd column

A → 14 → 4th row 1st column 50m .

78. OMIT

(1) 14, 34, 88, 95 (2) 63, 44, 88, 03 (3) 79,09,61,41 (4) 97,34,62,95

Ans. **(1)**

Sol. O → 14 → 4th row 1st column 50m .

A → 14 → 4th row 3rd column 50m .

Directions: (Ques. 79-83) Study each of the following tables and choose the alternative which can best replace the sign of interrogation (?)

79.

963	2	844	2	?	1
903	?	90	2	20	0

(1) 0 (2) 3 (3) 5 (4) 7

Ans. **(3)**

Sol.

3	8	10	2	5	1
+6	+56	+90	+2	+20	+0
$3^2=9$	$8^2=64$	$10^2=100$	$2^2=4$	$5^2=25$	$1^2=1$

80.

1	2	3	2	10	12
2	5	12	10	16	13
1	2	1	?	10	24

(1) 5 (2) 11 (3) 13 (4) 8

Ans. **(3)**

Sol.

1	2	3	2	10	12
2	5	12	10	16	13
+1	+2	1	+13	10	24
$2^2=4$	$3^2=9$	$4^2=16$	$5^2=25$	$6^2=36$	$7^2=49$

81.

963	2	844
464	?	903

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

Ans. **(2)**

Sol. $9+6+3=18,\ 18-16=2,\ 8+4+4=16$

$4+6+4=14.\ 14-12=2,\ 9+0+3=12$

82.

1	2	3
11	7	5
120	45	?

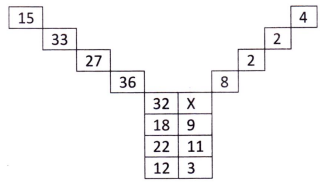
(1) 19 (2) 17 (3) 16 (4) 15

Ans. **(2)**

Sol.

1	2	3
11	7	5
$11^2-1^2=120$	$7^2-2^2=45$	$5^2-3^2=16$

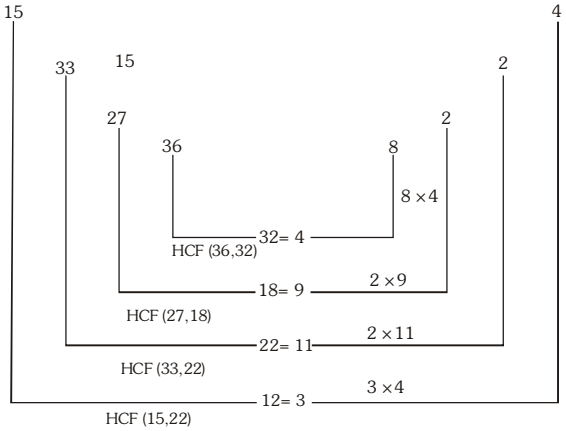
83.



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

Ans. (2)

Sol.



Directions: (Ques. 84-86) : In each of the following questions four words have been given each of which three are alike in some manner and the fourth one is different. Choose out the odd one.

84.

(1) Apple (2) Mango (3) Watermelon (4) Guava

Ans. (3)

Sol. Apple, Mango, & Guava are trees. (watermelon lies on ground)

85. (1) Microscope (2) Telescope (3) Periscope (4) Stethoscope

Ans. (4)

Sol. Microscope, Telescope & Periscope are to see small/big objects.

86 (1) Commander (2) Commodore (3) Brigadier (4) Admiral

Ans. (3)

Sol. It is a rank in army. Other ranks are of navy.

Direction: (Ques. 87 - 90) In each of the following questions series of numbers/alphabets is given with term/terms missing. Choose the correct alternative that will continue the same pattern and fill in the blank spaces

87. $\frac{4}{9}, \frac{9}{20}, (.....), \frac{39}{86}$

(1) $\frac{17}{40}$ (2) $\frac{19}{42}$ (3) $\frac{20}{45}$ (4) $\frac{29}{53}$

Ans. (2)

Sol. $\frac{4\times2+1}{9\times2+2}, \frac{9\times2+1}{20\times2+2} = \frac{14\times2+1}{42\times2+2} = \frac{39}{86}$

88. $\frac{2}{\sqrt{5}}, \frac{3}{5}, \frac{4}{5\sqrt{5}}, \frac{5}{25}, (.....)$

(1) $\frac{6}{5\sqrt{5}}$ (2) $\frac{6}{25\sqrt{5}}$ (3) $\frac{6}{125}$ (4) $\frac{7}{25}$

Ans. **()**

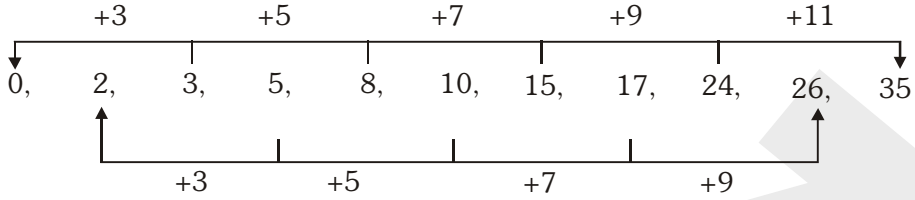
Sol. $\frac{2+1}{\sqrt{5}\times\sqrt{5}} = \frac{3+1}{5\times\sqrt{5}} = \frac{4+1}{5\sqrt{5}\times\sqrt{5}} = \frac{5+1}{25\times\sqrt{5}} = \frac{6}{25\sqrt{5}}$

89. 0, 2, 3, 5, 8, 10, 15, 17, 24, 26, (.....)

(1) 35 (2) 32 (3) 30 (4) 28

Ans. **(1)**

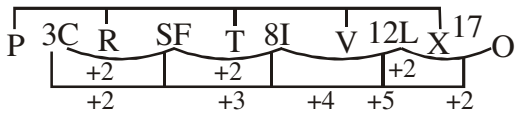
Sol.



90. P3C, R5F, T8I, V12L, (.....)

(1) Y17O (2) X17M (3) X17O (4) X16O

Ans. **(3)**



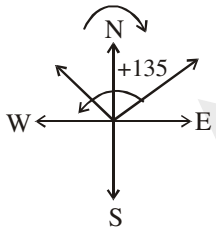
91. A man is facing north-west. He turns 90° in the clockwise direction and then 135° in the anticlockwise direction. Which direct is he facing now

(1) East (2) West (3) North (4) South

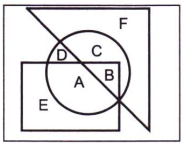
Ans. **(2)**

Sol. 90° clockwise → N – E

135° anticlockwise → west



92. Which one of the following statement is correct with regard to the given figure



(1) A and B are in all the three shapes (2) E, A, B, C are in all the three shapes

(3) F, C, D, B, A are in all the three shapes (4) Only B is in all the three shapes

Ans. **(4)**

Sol. B is in rectangle, circle, triangle and square.

93. Arrange the following given names in the appropriate order based on the telephone directory (telephone directory) and select the correct order.

1. Avdesh 2. Avadhesh 3. Awadesh 4. Awadhesh

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

Ans. (2)

Sol. (2) Avadhesh

(1) Avdesh

(3) Awadesh

(4) Awadhesh

94. A B C DE F G H I J K L M N O P Q R S T U V W X Y Z

Which letter is exactly midway between H and S in the given alphabet series

(1) L (2) M (3) N (4) No such letter

Ans. (4)

Sol. No such letter exist

95. Which letter is midway between 22nd letter from the left and 21st letter from the right

(1) L (2) M (3) H (4) O

Ans. (3)

Sol. 22nd letter from left is V

21st letter from right is F

96. How many squares does the given figure have?

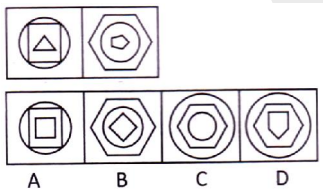
(1) 6 (2) 7 (3) 7 (4) 10

Ans. (3)

Sol.

Directions (Ques. 97 : In the following questions there are two problem figures followed by the answer figures labelled as A,B,C and D. The two problem figures have some common characteristics/features. Select the answer figure which has the same commonality.

97.

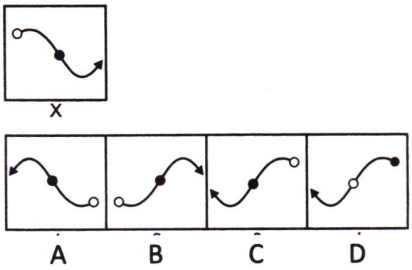


(1) C (2) D (3) A (4) B

Ans. (2)

Sol. Triangle makes quadrilateral and pentagon makes hexagon.

98. Choose the correct mirror-image of the figure (x) from the amongst the four alternatives A,B,C and D

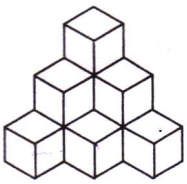


(1) 1 (2) 2 (3) 3 (4) 4

Ans. (3)

Sol. 3rd Option

99. How many cubes are there in the following figure?



(1) 11 *(2) 10 (3) 7 (4) 6

Ans. (2)

477Sol. Total 10 cubes

100. You are given a figure (x) followed by four figures 1,2,3 and 4 such that (x) is embedded in one of them. Trace out the correct alternative

(1) A (2) B *(3) C (4) D

Ans. (3)