NATIONAL TALENT SEARCH EXAMINATION (NTSE_2020-2021) STAGE -1 [PAPER CODE :]
STATE : KERALA PAPER : MAT

Date: 24.01.2021

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

1. Analyse the statement and find the correct answer.

$A+B>C+D$ and

$B+C>A+D$, then it is definite that :

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

Ans. 4

Sol. $A+B>C+D$ _____ (i)

$B+C>A+D$ _____ (ii)

$(i)+(ii): \cancel{A}+2B+\cancel{C}>\cancel{C}+2D+\cancel{A}$

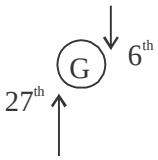
$\therefore B>D$

2. Gopu ranks sixth from the top and twenty seventh from the bottom in a class. How many students are there in the class ?

(1) 31 (2) 32 (3) 33 (D)34

Ans. 2

Sol. No. of students $=(6+27)-1=32$



3. If the first september 2019 is Sunday, then first October 2019 will be :

(1) Sunday (2) Monday (3) Tuesday (4) Wednesday

Ans. 3

Sol. 1st Sept 2019 : Sun
1st Oct 2019 : ? +30 days i.e. 2 odd days

Sun + 2 = Tuesday

4. If P means 'division', T means 'addition', M means 'substraction' and D means 'multiplication', then what will be the value of the expression

12 M 12 D 28 P 7 T 15 ?

(1) -21 (2) -15 (3) 15 (4) 45

Ans. 1

Sol. 12 M 12 D 28 P 7 T 15

12 – 12 × 28 ÷ 7 + 15

$=12-12\times4+15$

$=12-48+15$

$=-21$

5. Arrange the given words in a meaningful sequence and then choose the most appropriate sequence from amongst the alternatives provided below.

(a) Doctor

(b) Fever

(c) Prescribe

(d) Diagnose

(e) Medicine

(1) (a), (d), (c), (b), (e)

(2) (b), (a), (c), (d), (e)

(3) (b), (a), (d), (c), (e)

(4) (b), (d), (c), (e), (a)

Ans. 3

Sol. Fever, Doctor, Diagnose, Prescribe, Medicine

6. Let a, b, c and d be natural numbers such that a-3012 = b+3013 = c+3014= d-3015. Which on of the following is the smallest natural number ?

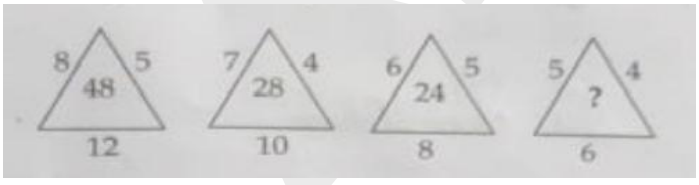
(1) a (2) b (3) c (4) d

Ans. 3

Sol. $a-3012=b+3013=c+3014=d-3015$

c is the smallest natural number

7. Find the missing number, if the series of figures follow a certain pattern.



(1) 15 (2) 12 (3) 18 (4) 20

Ans. 2

Sol. $\frac{8\times5\times12}{10}=48$

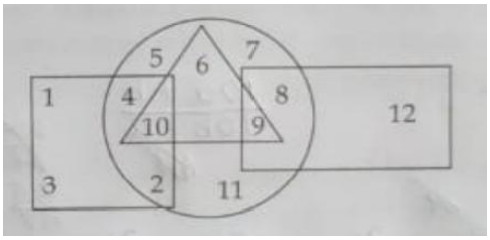
$\frac{7\times4\times10}{10}=28$

$\frac{6\times5\times8}{10}=24$

$\frac{5\times4\times6}{10}=12$

Directions (Questions 8 to 11)

Study the given figure carefully and answer the questions that follow. The figures given are square, circle , triangle and rectangle.



8. Which number belongs to all figures

(1) 3 (2) 4 (3) 6 (4) None of these

Ans. 4

Sol.

9. What is the sum of the numbers which belong to two figures only ?

(1) 6 (2) 15 (3) 20 (4) None of these

Ans. 3

Sol. $4+2+6+8=20$

10. What is the product of the numbers which belong to three figures only ?

(1) 90 (2) 540 (3) 440 (4) None of these

Ans. 1

Sol. $10\times9=90$

11. What is the sum of the numbers which belong to one figure only ?

(1) 43 (2) 39 (3) 41 (4) None fo these

Ans. 2

Sol. $1+3+5+7+11+12=39$

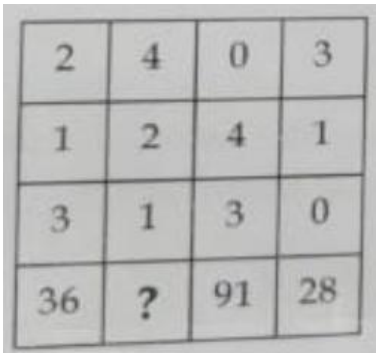
12. A two digit number is reversed. The larger of the two numbers is divided by the smaller one. What is the largest possible remainder ?

(1) 45 (2) 36 (3) 27 (4) 9

Ans. 1

Sol. $\frac{94}{49}\xrightarrow{R}45$

13. See the number matrix given below. Row wise or column wise these numbers follow a certain rule. Identify this rule and find the missing number.



2	4	0	3
1	2	4	1
3	1	3	0
36	?	91	28

(1) 21 (2) 48 (3) 59 (4) 73

Ans. 4

Sol. $2^3+1^3+3^3=36$

$0^3+4^3+3^3=91$

$3^3+1^3+0^3=28$

$\therefore 4^3+2^3+1^3=73$

14. Find the missing term in the series :

4, 8, 16, ...?...., 44, etc.

(1) 24 (2) 28 (3) 32 (4) 36

Ans. 2

Sol. $4 \overset{+4}{\rightarrow} 8 \overset{+8}{\rightarrow} 16 \overset{+12}{\rightarrow} \overset{28}{?} \overset{+16}{\rightarrow} 44$

15. In the following number series one term is wrong. Find the wrong term.

2,5,10,17,26,37,50,64

(1) 17 (2) 26 (3) 37 (4) 64

Ans. 4

Sol. $2 \overset{+3}{\rightarrow} 5 \overset{+5}{\rightarrow} 10 \overset{+7}{\rightarrow} 17 \overset{+9}{\rightarrow} 26 \overset{+11}{\rightarrow} 37 \overset{+13}{\rightarrow} 50 \overset{+15}{\rightarrow} 64$

64 is the wrong term.

Directions (Questions 16 to 20) :

Study the information given below and answer the questions that follow :

16. Who is the foootball player ?

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

Ans. 2

Sol. A, B, C, D, E

1 Football player $\longrightarrow$ Male $\longrightarrow$ B

1 Cricket player $\longrightarrow$ Male $\longrightarrow$ E

1 Hockey player $\longrightarrow$ C

A and D : Unmarried ladies (No Game)

$\underset{(\text{Husband})}{E} \leftrightarrow \underset{(\text{Wife})}{C^-} \rightarrow B^+$

17. Who is the hockey player ?

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

Ans. 3

Sol. A, B, C, D, E

1 Football player $\longrightarrow$ Male $\longrightarrow$ B

1 Cricket player $\longrightarrow$ Male $\longrightarrow$ E

1 Hockey player $\longrightarrow$ C

A and D : Unmarried ladies (No Game)

$\underset{(\text{Husband})}{E} \leftrightarrow \underset{(\text{Wife})}{C^-} \rightarrow B^+$

18. Who is the cricket player ?

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

Ans. 4

Sol. A, B, C, D, E

1 Football player $\longrightarrow$ Male $\longrightarrow$ B

1 Cricket player $\longrightarrow$ Male $\longrightarrow$ E

1 Hockey player $\longrightarrow$ C

A and D : Unmarried ladies (No Game)

$\underset{(\text{Husband})}{E} \leftrightarrow \underset{(\text{Wife})}{C^-} \rightarrow B^+$

19. Who is the wife of E ?

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

Ans. 3

Sol. A, B, C, D, E

1 Football player $\longrightarrow$ Male $\longrightarrow$ B

1 Cricket player $\longrightarrow$ Male $\longrightarrow$ E

1 Hockey player $\longrightarrow$ C

A and D : Unmarried ladies (No Game)

$\underset{\text{(Husband)}}{E} \leftrightarrow \underset{\text{(Wife)}}{C^-} \rightarrow B^+$

20. The three ladies are :

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

Ans. 4

Sol. A, B, C, D, E

1 Football player $\longrightarrow$ Male $\longrightarrow$ B

1 Cricket player $\longrightarrow$ Male $\longrightarrow$ E

1 Hockey player $\longrightarrow$ C

A and D : Unmarried ladies (No Game)

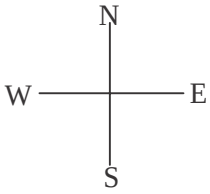
$\underset{\text{(Husband)}}{E} \leftrightarrow \underset{\text{(Wife)}}{C^-} \rightarrow B^+$

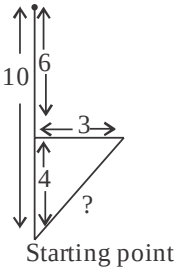
21. Adarsh travels 10 km towards North. From there he travels 6 km towards South. Then, he travels 3km towards East. How far and in which direction is he with reference to his starting point ?

(1) 5 km west (2) 7 km west (3) 7 km East (4) 5 Km Nort-east

Ans. 4

Sol.





5 km North - East

$? = \sqrt{4^2 + 3^2}$

$= \sqrt{16 + 9}$

$= \sqrt{25}$

$= 5\,\text{km}$

22. Which of the following words will come first, if the words are arranged alphabetically as in a dictionary ?

Spine, Spinal, Spindle, Spinet

(1) Spine (2) Spinal (3) Spindle (4) Spinet

Ans. 2

Sol. Dictionary order : Spinal, Spindle, Spine, Spinet

23. Which term will replace the question mark in the series ?

ABD, DFI, GJN, JNS,.....?.....

(1) MRX (2) MRW (3) MQW (4) NRX

Ans. 1

Sol.

A	B	D
+3	+4	+5
D	F	I
+3	+4	+5
G	J	N
+3	+4	+5
J	N	S
+3	+4	+5
M	R	X

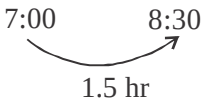
24. Levan and Kushan walk around a circular park. They start at 7 a.m, from the same point in the opposite directions . Levan walks at a speed of 2 rounds per hour. Kushan walks at a speed of 3 rounds per hour. How many times shall they cross each other after 7.00 a. m and before 8.30 a.m ?

(1) 7 (2) 6 (3) 5 (4) 4

Ans. 1

Sol. Relative speed $=(3+2)$ rounds per hour

= 5 rounds per hour

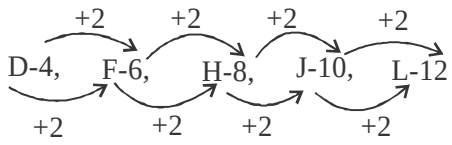


$\therefore$ 7 complete rounds

25. D-4, F-6, H-8, J-10, ? -?

(1) K-12 (2) L-12 (3) L-11 (4) K-11

Ans. 2

Sol. 

26. O-24, L-20, I-16, F-12, ?-?

(1) C-6 (2) D-8 (3) E-6 (4) C-8

Ans. 4

Sol. Lettice - 3

$\therefore C-8 \Rightarrow (4)$ correct

No. -4

27. _nmmn_mmn_mmnn_

(1) nmmn (2) mnnm (3) nnmm (4) nmnm

Ans. *

Sol.

28. a_bccb_ca_cca_baab_c

(1) ababc (2) abcaa (3) accab (4) bacaa

Ans. 1

Sol. (1) a a b c c b b c a a c c a b b a a b c c

29. Circle : Diameter : : Square : ____?

(1) Volume (2) Area (3) Diagonal (4) Perimeter

Ans. 3

Sol. Longest distance between any two point on circle

$\therefore$ For square diogonal is longest dist^{n}

$\therefore$ (3) is correct

30. Mango : Fruit : : Potato : ____?

(1) Root (2) Fruit (3) Stem (4) Flower

Ans. 3

Sol. By Observation

31. Deuce : Tennis : : Googly : ___?

(1) Cricket (2) Football (3) Hockey (4) Polo

Ans. 1

Sol. Cricket by observation (1) correct

32. 3 : 243 : : 5 : ___?

(1) 425 (2) 465 (3) 625 (4) 3125

Ans. 4

Sol. $3:3^5::5:\underline{5^5} \rightarrow 3125$

$\therefore (4)$ is correct

33. 25 : 37 : : 49 : _____?

(1) 41 (2) 65 (3) 56 (4) 60

Ans. 2

Sol. $5^2:6^2+1::7^2:(8^2+1) \Rightarrow 65$

$\Rightarrow (2)$ is correct

Directions (Questions 34 to 36) :

Choose the odd word which is least like the other words in the group.

34. (1) Copper

(2) Zinc

(3) Brass

(4) Aluminium

Ans. 3

Sol. (3) Brass [Rest all are metals]

35. (1) Calender

(2) Year

(3) Date

(4) Month

Ans. 1

Sol. (1) Calendar [Rest all three comes under calendar]

36. (1) Trunk

(2) Tree

(3) Fruit

(4) Leaf

Ans. 2

Sol. (2) Tree [Rest all three are branch of tree]

37. Who is good in Cricket, Hockey and Volleyball ?

(1) Sachin (2) Krishnan (3) Rahul (4) Ganesh

Ans. 3

Sol.

	Cricket	Volley	Hockey	Kabadi	Football
Rahul	✓	✓	✓	X	X
Krishnan	✓	✓	X	✓	X
Sachin	✓	X	✓	✓	✓
Ganesh	X	✓	X	✓	✓
Michel	X	X	X	✓	✓

38. Who is good in Kabaddi, Cricket, Hockey and Football ?

(1) Sachin (2) Krishnan (3) Ganesh (4) Rahul

Ans. 1

Sol.

	Cricket	Volley	Hockey	Kabadi	Football
Rahul	✓	✓	✓	X	X
Krishnan	✓	✓	X	✓	X
Sachin	✓	X	✓	✓	✓
Ganesh	X	✓	X	✓	✓
Michel	X	X	X	✓	✓

39. Who is good in Kabaddi, Volleyball and Football ?

(1) Sachin (2) Krishnan (3) Rahul (4) Ganesh

Ans. 4

Sol.

	Cricket	Volley	Hockey	Kabadi	Football
Rahul	✓	✓	✓	X	X
Krishnan	✓	✓	X	✓	X
Sachin	✓	X	✓	✓	✓
Ganesh	X	✓	X	✓	✓
Michel	X	X	X	✓	✓

40. Who is good in all the five games ?

(1) Rahul (2) Sachin (3) Krishnan (4) None of them

Ans. 4

Sol.

	Cricket	Volley	Hockey	Kabadi	Football
Rahul	✓	✓	✓	X	X
Krishnan	✓	✓	X	✓	X
Sachin	✓	X	✓	✓	✓
Ganesh	X	✓	X	✓	✓
Michel	X	X	X	✓	✓

41. If $P \times Q - S$, which of the following is true ?

(1) S is wife of Q

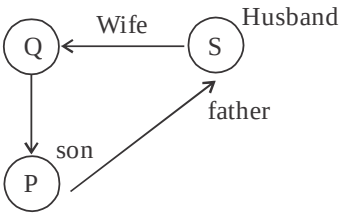
(2) S is father of P

(3) P is daughter of Q

(4) Q is father of P

Ans. 2

Sol. $P \times Q - S$



42. If $T - S \times B - M$, which of the follwoing is not true ?

(1) B is mother of S

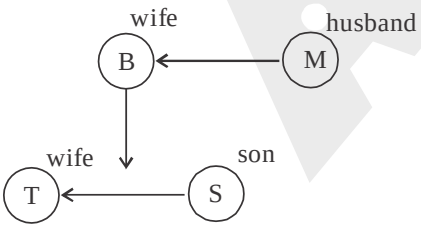
(2) M is husband of B

(3) T is wife of S

(4) S is daughter of B

Ans. 4

Sol. $T - S \times B - M$



43. The average age of three students and the teacher is 24 years. All the three students are of same age. The difference between the age of the teacher and each student is 28 years. What is the age of the teacher ?

(1) 35 years (2) 36 years (3) 40 years (4) 45 years

Ans. 4

Sol. Let age of teaches be x

then age of student is (x-28)

$$\text{Avg. age } = \frac{(x-28)\times 3 + x}{4}$$

$$\Rightarrow 24 = \frac{3x - 84 + x}{4}$$

$$\Rightarrow 96 = 4x - 84$$

$$\Rightarrow 4x = 180$$

$$x = 45$$

44. What is the code for - ' the dog was frightened' ?

(1) 5438 (2) 8263 (3) 1378 (4) None of these

Ans. 3

Sol. 8 1 6 3 2 1 means The brown dog frightned the cat.

6 4 8 5 1 means the Frightened cat ran away

7 6 2 1 means the cat was brown

3 4 1 means the dog ran

So,

1 means (the), 2 → brown, 6 → cat, 3 → dog , 7 → was, 4 → ran, 8 → Frightened, 5 → away

The dog was frightened

1 3 7 8

45. What is the code for - ' Frightened' ?

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

Ans. 4

Sol. 8 1 6 3 2 1 means The brown dog frightned the cat.

6 4 8 5 1 means the Frightened cat ran away

7 6 2 1 means the cat was brown

3 4 1 means the dog ran

So,

1 means (the), 2 → brown, 6 → cat, 3 → dog , 7 → was, 4 → ran, 8 → Frightened, 5 → away

46. What is the code for - 'away' ?

(1) 1 (2) 5 (3) 6 (4) 7

Ans. 2

Sol. 8 1 6 3 2 1 means The brown dog frightned the cat.

6 4 8 5 1 means the Frightened cat ran away

7 6 2 1 means the cat was brown

3 4 1 means the dog ran

So,

1 means (the), 2 → brown, 6 → cat, 3 → dog , 7 → was, 4 → ran, 8 → Frightened, 5 → away

47. What is the code for-' brown' ?

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

Ans. 1

Sol. 8 1 6 3 2 1 means The brown dog frightned the cat.

6 4 8 5 1 means the Frightened cat ran away

7 6 2 1 means the cat was brown

3 4 1 means the dog ran

So,

1 means (the), 2 → brown, 6 → cat, 3 → dog , 7 → was, 4 → ran, 8 → Frightened, 5 → away

48. Statements :

All film stars are playback singers

All film directors are film stars.

Conclusions :

I. All film directors are playback singer

II. Some film stars are film directors.

(1) If only conclusion I follows.

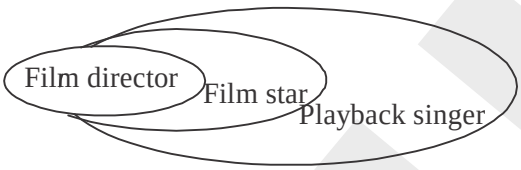
(2) If only conclusion II follows

(3) If both conclusions I and II follow

(4) If neither conclusion I nor II follow

Ans. 3

Sol.



49. Statements :

All politians are honest.

All honest are fair

Conclusions :

I. Some honest are politians

II. No honest is politician

III. Some fair are politicians

(1) None follows.

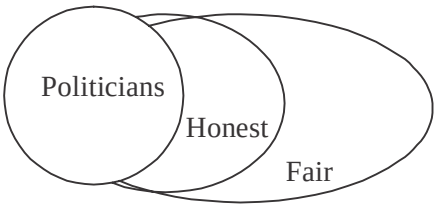
(2) Only I follows

(3) Only I and II follows.

(4) Only I and III followrs

Ans. 4

Sol.



Directions (Questions 50 and 51)

Study each of the following tables and choose the alternative which can best replace the ? mark

50.

4	7	10	2	?	3
12	42	90	2	20	6

Ans. 1

Sol.

4	7	10	2	5	3
12	42	90	2	20	6

by observation.

Directions (Questions 51) :

Study each of the following tables and choose the alternative which can best replace the? mark.

51.

1	2	3	4	5	6
2	5	12	10	15	25
1	2	1	?	5	5

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

Ans. 3*

Sol.

1	2	3	4	5	6
2	5	12	10	15	25
1	2	1	?	5	5

4 9 16 16 25 36

1 + 2 + 1 = 4, 2 + 5 + 2 = 9

Similarly $\rightarrow 4+10+x=16 \Rightarrow \boxed{x=2}$

Directions (Questions 52 and 53) :

Study the information given below and answer the questions that follow.

There are 40 students admitted to a nursery class.

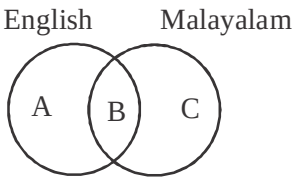
Some students can speak only Malayalam and some can speak only English. 6 students can speak both Malayalam and English. The number of students who can speak English is 16.

52. How many students can speak only English?

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

Ans. 3

Sol.



Given

Total = 40

B = 6

A + B = 16

A + B + C = 40

Only english $\Rightarrow A+B=16$

B = 6

So, A = 16 – 6 = 10

53. How many students can speak only Malayalam?

(1) 30 (2) 24 (3) 34 (4) 22

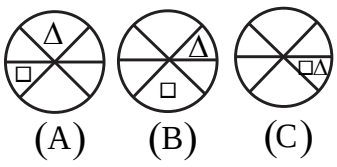
Ans. 2

Sol. (2) Only Malayalam $\Rightarrow A+B+C=40$

$A+B=16$

$\Rightarrow \boxed{C=24}$

54. Problem figures



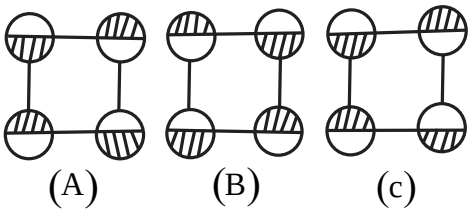
Answer figures:

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

Ans. 2

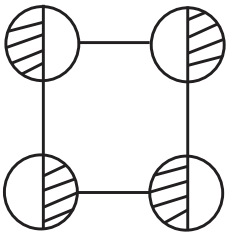
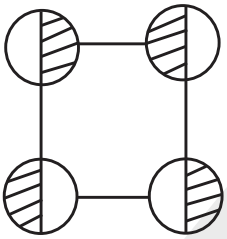
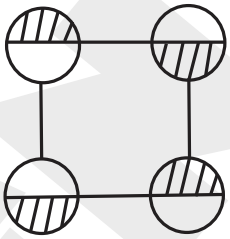
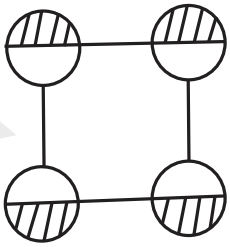
Sol. By observation

55. Problem figures :



?

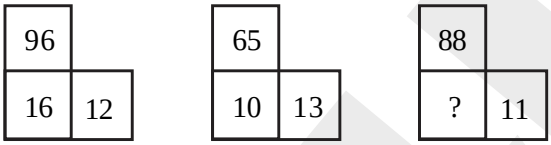
Problem figures :

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

Ans. 3

Sol. By observation

56. Examine the pattern and find the missing one.



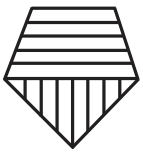
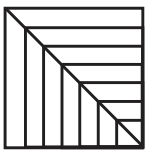
(1) 12 (2) 24 (3) 10 (4) 16

Ans. 4

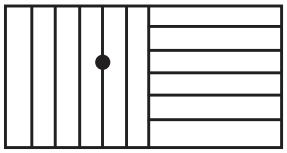
Sol. $\left[\frac{96}{12}\right]\times 2=16$

So, $\left[\frac{65}{13}\right]\times 2=10\Rightarrow\left[\frac{88}{11}\right]\times 2=\boxed{16}$

57. Four figures are given below. Three of them are alike. One is different. Identify the different one.

(1)  (2) 

(3) 

(4) 

Ans. 2

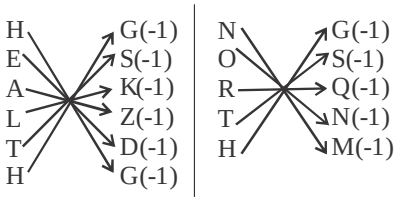
Sol. By observation

58. If HEALTH is written as GSKZDG, then how will NORTH be written in that code?

(1) OSUI (2) GSQNM (3) FRPML (4) IUSPO

Ans. 2

Sol.



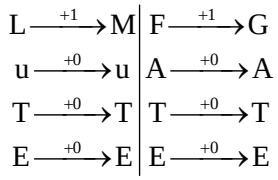
GSQNM

59. If in a certain code LUTE is written as MUTE and FATE is written as GATE, then how will BLUE be written in that code?

(1) CLUE (2) GLUE (3) FLUE (4) SLUE

Ans. 1

Sol.



So,

B	L	U	E
+1	+0	+0	+0

C L U E

60. In a coding system A = 26, SUN = 27, then CAT = ?

(1) 24 (2) 27 (3) 57 (4) 58

Ans. 3

Sol. A = 26, S U N = 27

C A T = ?

$\Rightarrow A = 26 = Z(\text{opp. letter})$

$\Rightarrow$ S U N
$\downarrow$ $\downarrow$ $\downarrow$
H F M $\Rightarrow [8+6+13] = 27$

$\Rightarrow$ C A T
$\downarrow$ $\downarrow$ $\downarrow$
X Z G $\Rightarrow [24+26+7] = 57$

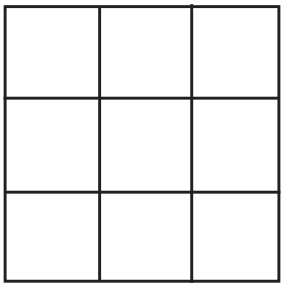
61. Five bells begins to toll together and toll respectively at intervals of 6,5,7,10 and 12 seconds. How many times will they toll together in one hour excluding the one at the beginning?

(1) 7 times (2) 8 times (3) 9 times (4) 11 times

Ans. 2

Sol. All bell will together will after exactly 420 seconds (which is the LCM of 6, 5, 7, 10 and 12 seconds]
So, with in one has i.e., in 60 min, the bells will toll together = 8 times.

62. How many squares are there in the figure?



(1) 18 (2) 14 (3) 10 (4) 9

Ans. 2

Sol. By observation

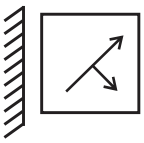
63. Find the correct mirror image of MAGAZINE

(1) MAGAZINE (2) EMIZAGAM (3) MAGAZINE (4) EMIZAGAM

Ans. 4

Sol. By observation

64. Choose the correct mirror image of the figure (A) from the alternatives given below:

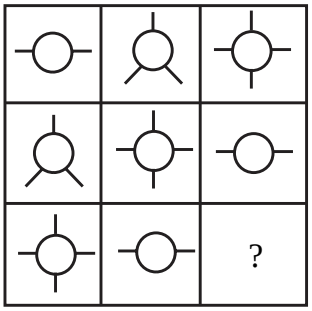


(1)  (2)  (3)  (4) 

Ans. 3

Sol. By observation

65. Find out which of the answer figurs (1), (2), (3), (4) completes the figure matrix.



Answer figures:

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

Ans. 1

Sol. By observation

Directions (Questions 66 to 69) :

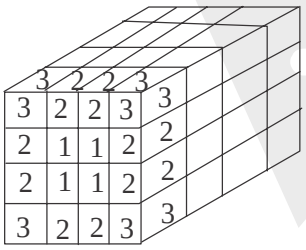
A cube is coloured white on all faces. Then it is cut into 64 smaller cubes of equal size. Now, answer the following questions based on this statement.

66. How many cubes have no face coloured?

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

Ans. 3

Sol.



White colour on all faces

No face colour =

$$64-\left[8+24+24\right]$$
$$\downarrow\ \downarrow\ \downarrow$$
3face colour 2face colour 1 face colour

$$=64-56$$

$$=8$$

67. How many cubes are there which have only one face coloured?

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

Ans. 4

Sol. One face coloured = $6\times4=24$

68. How many cubes have two white opposite faces?

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

Ans. 1

Sol. By observation

69. How many cubes have 3 faces coloured?

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

Ans. 3

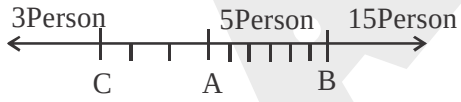
Sol. 3 faces coloured = 8

70. Three persons A,B,C are standing in a queue. There are 5 persons between A and b and 8 persons between B and C. If there are 3 persons ahead of C and 21 behind A, what could be the minimum number of persons in the queue?

(1) 27 (2) 28 (3) 40 (4) 41

Ans. 2

Sol.



Total minimum no. of person in queue = 28.

71. In the table, the numbers in rows follow a rule. Identify the rule and find the missing number.

5	570	7
4	271	6
3	480	?

(1) 5 (2) 9 (3) 10 (4) 11

Ans. 2

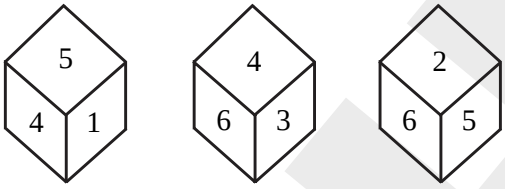
Sol.

5	570	7	$\Rightarrow 7+5=12=5+7+0$
4	271	6	$\Rightarrow 6+4=10=2+7+1$
3	480	?	$\Rightarrow 3+x=12=4+8+0$

$\Rightarrow \boxed{x=9}$

Directions (Questions 72 to 75) :

Three different positions X,Y, Z of a dice are shown in the figures. Answer the following questions which are based on these figures.



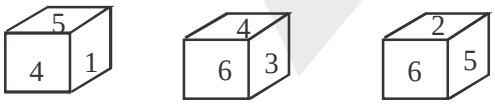
(X) (Y) (Z)

72. Which number lies at the bottom face in position (X)?

(1) 2 (2) 3 (3) 6 (4) Cannot be determined

Ans. 2

Sol.



(x) (y) (z)

In y & z using 'Rule 1'

$\rightarrow$ 4 & 2 opposite to each other

$\rightarrow$ 3 & 5 opposite to each other

So, 6 & 1 opposite to each other.

3 at the bottom face is position (X).

73. Which number lies at the bottom face in position (Y)?

(1) 1 (2) 2 (3) 5 (4) Cannot be determined

Ans. 2

Sol. 2 at the bottom face in position (Y).

74. Which number lies opposite 6?

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

Ans. 1

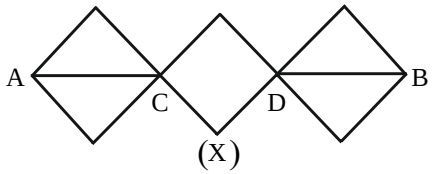
Sol. 1 is opposite to 6.

75. Which numbers are opposite to the numbers 6 and 5 in position (Z)?

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

Ans. 2

76. With reference to the figure (X), the number of different routes from A to B without retracing from C and D is:



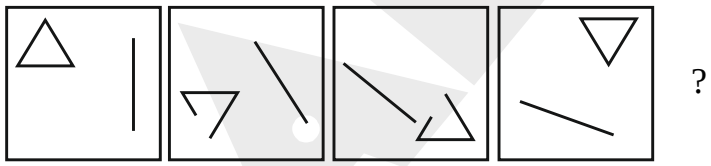
(1) 3 (2) 6 (3) 9 (4) 18

Ans. 4

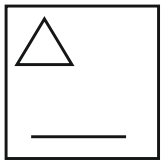
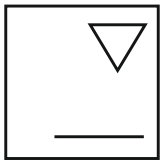
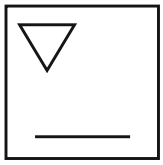
Sol. $3 \times 2 \times 3 = 18$

77. The elements of the problem figures given below are changing with a certain rules as we observe them from left to right. Find the next figure from the answer figures.

Problem figures:



Answer figures:

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

Ans. 1

Sol. By observation

Directions (Questions 78 to 82):

Read the given information carefully. Then answer the questions that follow.

Video classes on 5 subjects - Malayalam, English, Maths, Social Science and Science have to be arranged in a week from Monday to Friday. Only one class can be arranged in each day. Malayalam cannot be scheduled on Tuesday. English teacher is availble only on Tuesday. Maths class has to be scheduled immediately after the day of Malayalam class. Social Science class has to be scheduled immediately before the day of Malayalam class.

78. Which class is scheduled on Monday?

(1) Maths (2) Malayalam (3) Science (4) Social Science

Ans. 3

Sol.

	Mon	Tue	Wed	Thur	Fri
Malayalam	×	×	×	✓	×
English	×	✓	×	×	×
Maths	×	×	×	×	✓
Social Science	×	×	✓	×	×
Science	✓	×	×	×	×

79. Which class is scheduled between Maths and Social Science?

(1) Malayalam (2) Science (3) English (4) No class

Ans. 1

80. Which class is the last one in the week?

(1) Social Science (2) Science (3) Malayalam (4) Maths

Ans. 4

81. Which class is scheduled on Wednesday?

(1) Malayalam (2) Maths (3) Social Science (4) Science

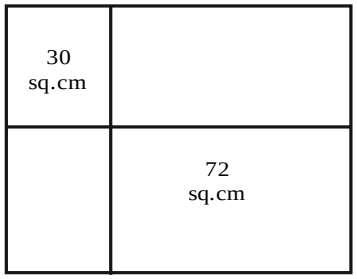
Ans. 3

82. Which class is scheduled before Maths class?

(1) Malayalam (2) Social Science (3) English (4) Science

Ans. 1

83. Consider the following figure and answer the question that follows.



A square is divided into four rectangles as shown. The length of the sides of rectangles are natural numbers. The areas of two rectangles are 30 sq.cm and 72 sq.cm as marked in the figure. Then what is the length of each side of the square in cm?

(1) 15 (2) 14 (3) 17 (4) 12

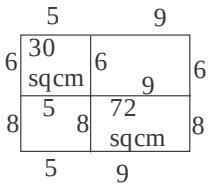
Ans. 2

Sol. By observation

$30 = 6 \times 5$

& $72 = 9 \times 8$

So according to the given fig

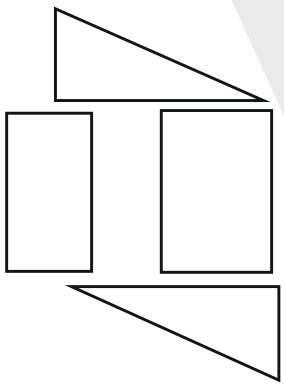


And, $(5+9) = (6+8)$

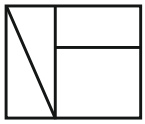
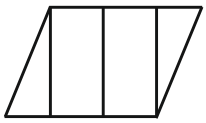
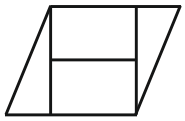
$14 = 14$

thus, side of square = 14 cm

84. Four cardboard pieces of specific shapes are shown in the following figure.



Which of the following figure given can be formed by joining these pieces together?

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

Ans. 4

Sol. By observation.

Directions (Questions 85 to 87):

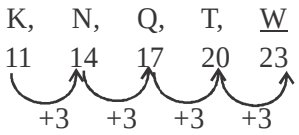
In each of the following questions, various terms of an alphabet series are given with one term missing as shown by(?). Choose the missing term from the alternatives.

85. K, N, Q, T, ?

(1) U (2) V (3) W (4) X

Ans. 3

Sol.

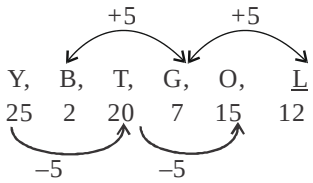


86. Y, B, T, G, O, ?

(1) N (2) L (3) M (4) K

Ans. 2

Sol.

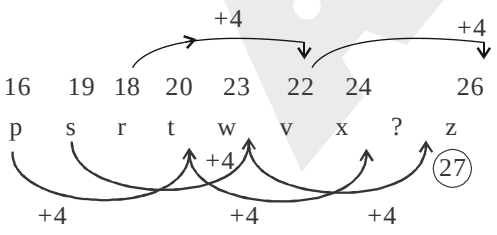


87. p s r t w v x ? z

(1) y (2) b (3) u (4) a

Ans. 4

Sol.



So, S, w, a

19 23

+4 +4

88. Choose the odd number pair which is different from others

(1) 5, 13 (2) 2, 17 (3) 3, 8 (4) 7, 11

Ans. 3

Sol. All pairs are prime except (3, 8)

89. Choose the odd word which is different from others

(1) IMF (2) SAARC (3) UNICEF (4) WHO

Ans. 2

Sol. Except SAARC, all other are agency by UN.

Directions (Questions 90 to 92):

There is a certain relationship between two given numbers on one side of : : . Identify this relationship and find the missing number on the other side.

90. 7 : 56 : : 9 : ?

(1) 63 (2) 81 (3) 90 (4) 99

Ans. 3

Sol. $7 : 56 :: 9 : \boxed{90}$ (7×8), (9×10)

91. 26 : 5 : : 65 : ?

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

Ans. 3

Sol. $26 : 5 :: 65 : \boxed{8}$ (5^2+1), (8^2+1)

92. 5 : 36 : : 7 : ?

(1) 64 (2) 55 (3) 63 (4) 56

Ans. 1

Sol. $5 : 36 :: 7 : \boxed{64}$ (6^2), (8^2)

93. How many integers are there between 1 and 100 which have 4 as a digit but are not divisible by 4?

(1) 5 (2) 11 (3) 12 (4) 13

Ans. 3

Sol. 12 by observation

94. If $\times$ means $-$, $+$ means $\div$, $-$ means $\times$ and $\div$ means $+$, then $15-2\div900+90\times100=?$

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

Ans. 2

Sol. By putting correct operators we get

$15\times2+900\div90-100$

$=15\times2+10-100$

$=30+10-100$

$=40-100$

$=-60$

Option (2)

95. If 'when' means '$\times$', 'you' means '$\div$', 'come' means '$-$' and 'will' means '$+$', then what will be the value of "8 when 12 will 16 you 2 come 10" ?

(1) 94 (2) 45 (3) 112 (4) 96

Ans. 1

Sol. 8 when 12 will 16 you 2 come 10. By putting correct operator we get

$\Rightarrow 8\times12+16\div2-10$

$=8\times12+8-10$

$=96+8-10$

$=104-10$

$=94$

Option (1)

96. There are Deer and Peacocks in a Zoo. By counting heads they are 80. The number of their legs are 200. How many peacocks are there?

(1) 60 (2) 50 (3) 30 (4) 20

Ans. 1

Sol. Let the no. of deer be x & peacocks by y.

ATQ,

$x+y=80.....(1)$

$4x+2y=200.....(2)$

Mutliply by (2) in equation (1) we get

$2x+2y=160.....(3)$

from equation (2) and (3) we get-

$$\begin{array}{rrr} 2x & +2y & =160 \\ 4x & +2y & =200 \\ - & - & - \\ \hline -2x & = & -40 \end{array}$$

$\boxed{X=20}$

From equation (1)

$x+y=80$

$y=80-20$

$\boxed{y=60}$

Directions (Questions 97 and 98):

Read the information carefully and answer the questions that follow:

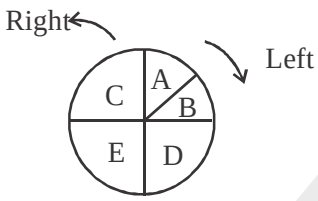
A, B, C, D and E are sitting around a circular table. C is to the immediate right of A and is second to the left of D. E is not between A and D. Then:

97. Who is between C and D?

(1) A (2) B (3) E (4) Cannot be determined

Ans. 3

Sol.



Option (3) - E

98. Who is second to the left of C?

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

Ans. 2

99. Which is the correct mirror image of EFFECTIVE ?

(1) ƎVITƆƎFFƎ (2) EVITCEFFE (3) ƎFFƎƆTIVƎ (4) ƎVITƆƎFFƎ

Ans. 1

Sol. by observation

100. If 18^{th} February, 2005 falls on Friday, then what will be the day on 18^{th} February, 2007?

(1) Sunday (2) Monday (3) Tuesday (4) Wednesday

Ans. 1

Sol. Given $18/02/2005 \rightarrow$ friday

$\downarrow +1$

so, $18/02/2006 \rightarrow$ saturday

$\downarrow +1$

$18/02/2007 \rightarrow$ Sunday