NATIONAL TALENT SEARCH EXAMINATION (NTSE-2020) STAGE -1

STATE : CHATTISGARH PAPER : MAT

Date: 03/11/2019

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

1. Choose the correct alternative to fill missing term/terms in the given series.

A, Z, D, W, P, K, M,.....

(A) M (B) N (C) L (D) T

Ans. ***(B)***

Sol.

A,	Z,	D	W,	P,	K,	M,	N
1	26	4	23	16	11	13	14
Sum 27		27		27		27	

2. YEB, WFD, UHG, SKI, ...

(A) QGC (B) TCL (C) QOL (D) None of these

Ans. ***(C)***

Sol. YEB, WFD, UHG, SKI, ***QOL***

Y	W	U	S	Q
25	23	21	19	17
	–2	–2	–2	–2

E	F	H	K	O
5	6	8	11	15
	+1	+2	+3	+4

B	D	G	I	L
2	4	7	9	12
	+2	+3	+2	+3

3. _____,siy, oeu, kag

(A) wnc (B) wnb (C) wmc (D) None of these

Ans. ***(D)***

Sol.

w	s	o	k	g	c
23	19	5	11	7	3
	–4	–4	–4	–4	–4

m	i	e	a	w	s
13	9	5	100 27	23	19
	–4	–4	–4	–4	–4

y	u	q	n	i
25	21	17	14	9
	–4	–4	–4	–4

4. asbaccaba aab cca_aa_a_ac

(A) ababab (B) aabbab (C) aaabab (D) abbaba

Ans. ***(C)***

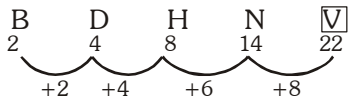
Sol. aabaccaba**_a_**aab**_a_**cca**_b_**aa**_a_**a**_b_**ac

5. B, D, H, N

(A) V (B) U (C) W (D) M

Ans. ***(A)***

Sol.

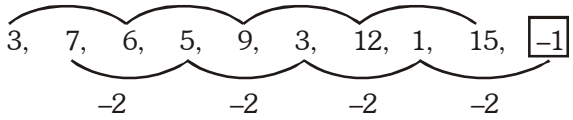


6. 3, 7, 6, 5, 9, 3, 12, 1, 15.....

(A) 18 (B) – 1 (C) 13 (D) None of these

Ans. ***(B)***

Sol.

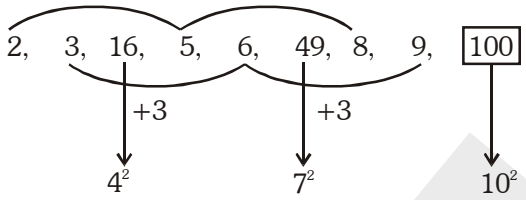


7. 2, 3, 16, 5, 6, 49, 8, 9.....

(A) 56 (B) 64 (C) 96 (D) 100

Ans. ***(D)***

Sol.

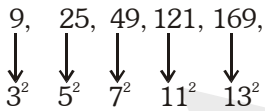


8. 9, 25, 49, 121,.....

(A) 225 (B) 169 (C) 196 (D) 144

Ans. ***(B)***

Sol.

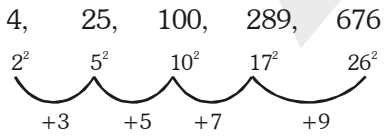


9. 4A, 25B, 100C, 289D,.....

(A) 922E (B) 676E (C) 355E (D) None of these

Ans. ***(B)***

Sol. 4A, 25B, 100C, 289D, ***676E***



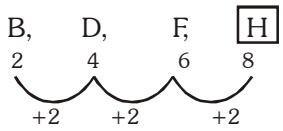
A, B, C, D, ***E***

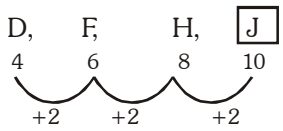
10. BD8, DF24, FH48,.....

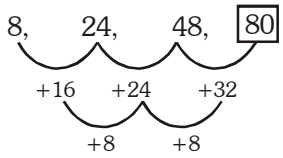
(A) HJ64 (B) HJ84 (C) H80 (D) HJ80

Ans. ***(D)***

Sol. BD8, DF24, FH48, HJ80







Direction (Q.11 to Q.12) : In the given questioin two word /terms are given in the left of : : sing. They have certain relationship between them. The same reationship exists between the word/term given to the right of : : sing and one of the given alternatives choose the correct alternative.

11. $3 : 3\frac{3}{8} :: 5 : ?$

(A) $5\frac{3}{8}$ (B) $5\frac{1}{8}$ (C) $5\frac{1}{8}$ (D) None of these

Ans. ***(A)***

Sol. a : b : : c : d

$a \times d = b \times c$

$\Rightarrow 3x = 3\frac{3}{8} \times 5$

$\Rightarrow 3x = \frac{27}{8} \times 5$

$\Rightarrow x = \frac{27}{8} \times 5 \times \frac{1}{3}$

$\Rightarrow x = \frac{45}{8}$

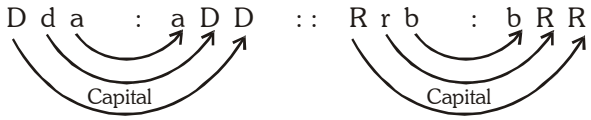
$\Rightarrow x = 5\frac{5}{8}$

12. Dda : aDD : : Rrb : ?

(A) RRb (B) DDA (C) LRR (D) BBr

Ans. ***(C)***

Sol. D d a : a D D :: R r b : b R R



13. Choose the correct alternative in which two words are same relationship as between the words in the left of ; :

(A) Prose : Novelist (B) Author : Book (C) Novel : Prose (D) None of these

Ans. ***(B)***

Sol. Poet : Verse : : ***Author*** : ***Book***

Direction (Q.14 to Q.15) : In the group of words given below all except one, share a comon similarity. Select the odd one.

14. (A) Biscuit (B) Bread (C) Milk (D) Khakhara

Ans. ***(C)***

Sol. All are Snacks except Milk

15. (A) Rupees (B) Dollar (C) Lira (D) Ghana

Ans. ***(D)***

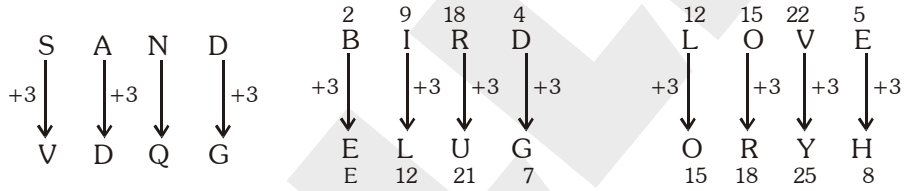
Sol. All are currency except Ghana

16. If in a code language SAND is written as VDQG and BIRD is written as ELUG, then LOVE will be written as

(A) ORTG (B) NPUH (C) PRYG (D) QRYH

Ans. ***(D)***

Sol.



Direction (Q.17 to Q.18) :

If in certain language :

(i) Traders are above law is written as 'lop eop fop'

(ii) Developers were above profitable is written as 'fop cop bop gop'

(iii) Developers stopped following traders is written as 'aop bop uop qop'

(iv) Following maps were laws is written as 'cop jop eop uop'

Sol. Traders are above law is written as 'lop eop fop' - lop eop aop fol
Developers were above profitable = fop cop bop gop
Developers stopped following traders = aop bop uop qop
Following maps were laws is written as 'cop jop eop uop'

Traders = aop	Developers = bop
are = lop	were = cop
above = fop	profitable = gop
laws = eop	stopped = qop
maps = jop	following = uop

17. Developers are following laws' would be written as

(A) bop cop uop eop (B) lop bop eop uop (C) aop cop lop qop (D) None of these

Ans. ***(B)***

Sol. lop bop eop uop

18. 'qop gop cop eop' would correctly mean.

(A) Profitable laws were stopped (B) Developers stopped following laws

(C) Traders were above profitable (D) None of these

Ans. ***(A)***

Sol. Profitable laws were stopped

19. If in a code language, 'GO' is coded as 32 and 'SHE' is coded as 49, then what will be the code for 'SOME'?

(A) 56 (B) 58 (C) 62 (D) 64

Ans. ***(A)***

Sol. Using the pattern

B G L Q Y
↓ ↓ ↓ ↓ ↓
25 20 15 10 5

The word Go can be coded as

G O
↓ ↓
20 + 12 = 32

asd SHE = as

S H E
↓ ↓ ↓
8 + 19 + 22 = 49

Similarly some can be coded as

S O M E
↓ ↓ ↓ ↓
8 + 12 + 14 + 22 = 56

20. If in code language 'FITER' is coded as 'GUJFS', then 'GOATS' will the coded as :

(A) OGBUT (B) HPBUT (C) HNBUT (D) FPBUR

Ans. ***(2)***

Sol.

6	9	20	5	18
F	I	T	E	R
↓	↓	↓	↓	↓ +1
G	J	U	F	S
7	10	21	6	19

7	15	1	20	19
G	O	A	T	S
↓ +1	↓ +1	↓ +1	↓ +1	↓ +1
H	P	B	U	T
8	16	2	21	20

21. While indroducing a lady, a man said "Her mother is the only daughter of my mother-in-law". What is the relation of the man with lady?

(A) Son (B) Brother (C) Husband (D) Father

Ans. ***(D)***

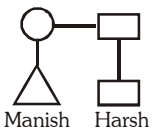
Sol. Since the mother- in-law of the man is the mother of the lady therefore the lady is the daughter of the man.

22. A woman Manish asked a man Harsh,. "You are the brother of my uncle' daughter. "How is Harsh related to Manish?

(A) Cousin (B) Son (C) Brother-in-law (D) Nephew

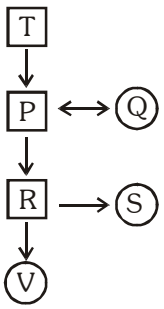
Ans. ***(A)***

Sol.



Direction (Q.23 to Q.25) : P, Q, R, S, T and U are members of a six family, R is on of P and Q. S is grand daughter of T. U is grand daughter of Q, P is the only onf son of his father T.

Sol.



23. Which of the following are huaband wife?

(A) P, S (B) T, U (C) P, Q (D) R, U

Ans. ***(C)***

24. How many female mebers are there in the family?

(A) P, S (B) T, U (C) P, Q (D) R, U

Ans. ***(B)***

25. Who is daughter of P?

(A) Q (B) R (C) S (D) U

Direction (Q.26. to Q.28) :

(i) F, G, H, I, J, K are six numbers.

(ii) These numbers are distinct.

(iii) K is greater than F.

(iv) F is greater than G.

(v) I is less than J but greater than F.

(vi) J is greater thna K but less than H.

(vii) The largest number is 60 and difference between two consecultive numbers is 10.

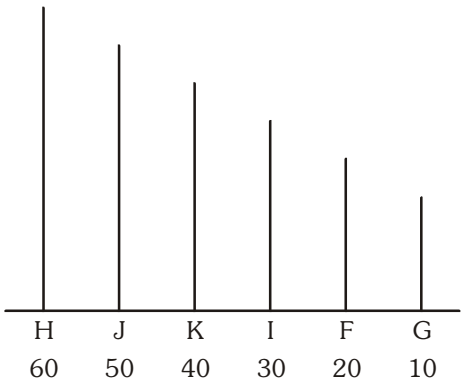
(viii) K and F are two consecutive numbers.

26. The largest number is

(A) H (B) G (C) F (D) K

Ans. ***(A)***

Sol.



27. Difference between the numbers J and F is

(A) 10 (B) 20 (C) 30 (D) 40

Ans. ***(C)***

Sol. 30

28. Which number is least?

(A) J (B) G (C) K (D) F

Ans. ***(B)***

Sol. G

29. If

P is taller than Q

R is shorter thna P

S is taller thna T but shorter than Q,

Who among them is tallest?

(A) P (B) Q (C) S (D) T

Ans. ***(A)***

Sol. P > Q

P > R

Q > S > T

30. Five girls part in a race, Rajshri finished before Mohila but behind Gaura, Ashma finshed before Mohil but behind Gaura. Ashma finished before sangeeta but behind Mohil. Who won the race?

(A) Rajshree (B) Gaura (C) Mohil (D) Data inadequate

Ans. ***(B)***

Sol. Gaura

Mohila

Ashma

Sangeeta

31. Five persons are sitting in a row. One of the two persons at the extreme ends is intelligent and other one is fair. A fat perons is sitting to the right of a weak person. A tall person is to the left of the fair person and the weak person is sitting between the intelligent and fat person. Which of them is sitting at the center?

(A) Intelligent (B) Fat (C) Fair (D) Weak

Ans. ***(B)***

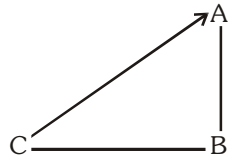
Sol. Fat

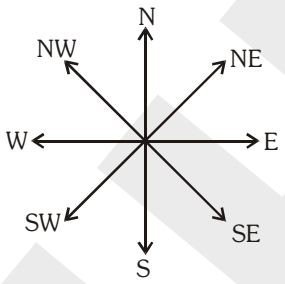
32. If A is to the north of B and C is in the west of B. Then in what direction A with respect to C /

(A) North-east (B) East (C) South-west (D) West

Ans. ***(A)***

Sol.



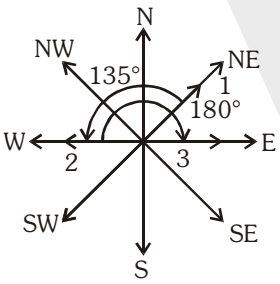


33. A person stands facing north east. He first turns 135° anticlockwise then after 180° clockwise. Then in what direction is he facing now?

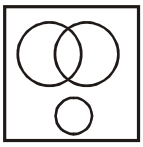
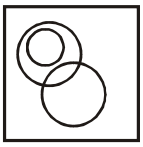
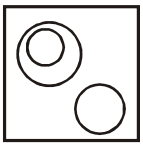
(A) East (B) West (C) North (D) South-West

Ans. ***(A)***

Sol.

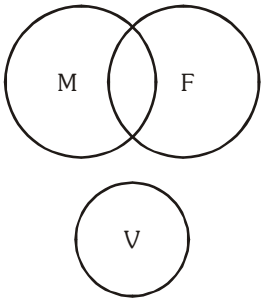


34. In a dinner, fish and meat both were served. Some ate only meet, some ate only fish and some ate both. The rest were vegetarians who did not either. Which of the following logical Venn-diagrams correctly illustrate this situation?

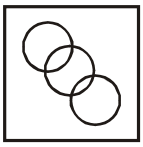
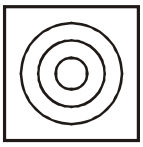
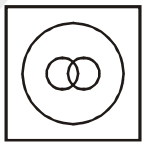
(A)  (B)  (C)  (D) None of these

Ans. ***(A)***

Sol.

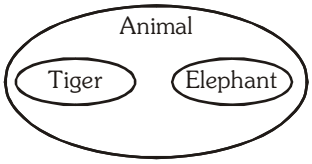


35. Which of the given Venn-diagrams denotes correct connection between the given classes.
Tiger, Animal Elehant

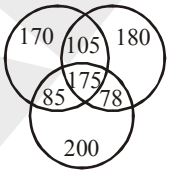
(A)  (B)  (C)  (D) 

Ans. ***(C)***

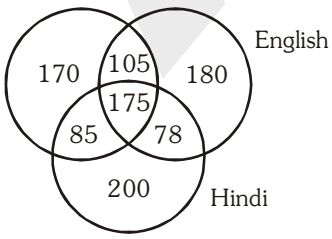
Sol.



Direction (Q.36 to Q.38) : A result of a survey of 1000 persons with respect to their know all the three languages?



Sol. Q.36 to Q.38) :



36. (A) 175/1000 (B) 7/550 (C) 1/25 (D) 1/27

Ans. (C)

Sol. Those who don't know = 1000 – 993

any of three = 7

Ans. $= \frac{7}{175} = \frac{1}{25}$

37. What is the ratio of those who know both Urdu and English to those who know only Hindi?

(A) 5/7 (B) 7/5 (C) 21/40 (D) None of these

Ans. (B)

Sol. Those who known both Urdu and English

$= 105 + 175 = 280$

$\frac{280}{200} = \frac{14}{10} = \frac{7}{5}$

38. Which language do most people know?

(A) Hindi (B) Urdu (C) English (D) Hindi and English

Ans. (D)

Sol. U = 535

E = 538

H = 538

39. What is unit digit in $[(264)^{102} + (264)103]$

(A) 1 (B) 6 (C) 0 (D) None of these

Ans. (C)

Sol. $(264)^{102} + (264)^{103}$

Cyclicity of 4 = 2

$\therefore \underset{\uparrow}{[(264)^2]^{51}} + \underset{\uparrow}{[(264)^2]^{51} \times 264}$

Unit digit = 4 Unit digit $4 \times 4 = 6$

Unit digit Sum = 4 + 6 = 0

40. $\frac{\left(3\frac{2}{3}\right)^2 - \left(2\frac{1}{2}\right)^2 \left(3\frac{2}{3} - 2\frac{1}{2}\right)^2}{\left(4\frac{3}{4}\right)^2 - \left(3\frac{1}{3}\right)^2 \left(4\frac{3}{4} - 3\frac{1}{2}\right)} =$

(A) $\frac{37}{97}$ (B) $\frac{74}{97}$ (C) $\frac{54}{97}$ (D) None of these

Ans. (B)

Sol. $\frac{\left(\frac{11}{3}\right)^3 - \left(\frac{5}{2}\right)^2}{\left(\frac{19}{4}\right)^2 - \left(\frac{10}{3}\right)^2} \div \left[\frac{\left(\frac{11}{3}\right) - \left(\frac{5}{2}\right)}{\left(\frac{19}{4}\right) - \left(\frac{10}{3}\right)}\right]$

$$= \frac{\left(\frac{11}{3}+\frac{5}{2}\right)\left(\frac{11}{3}-\frac{5}{2}\right)}{\left(\frac{19}{4}+\frac{10}{3}\right)\left(\frac{19}{4}-\frac{10}{3}\right)} \div \left[\frac{7}{6}\times\frac{12}{17}\right]$$

$$= \left(\frac{7}{6}\times\frac{12}{17}\right)\left(\frac{37}{6}\times\frac{12}{97}\right)\times \frac{17}{14}$$

$$= \frac{14}{17}\times\frac{74}{97}\times\frac{17}{14} = \frac{74}{97}$$

41. If '+' means '×', '×' means '–' means '÷' and '÷' means '+', then

$8 + 4 \times 9 - 3 + 1 = ?$

(A) 30 (B) 41 (C) 9 (D) 32

Ans. ***(A)***

Sol. $8 + 4 \times 9 - 3 \div 1 = ?$

$= 8 \times 4 - 9 \div 3 + \perp$

$= 8 \times 4 - 3 + \perp$

$= 32 - 3 + \perp$

$= 33 - 3$

$= 30$

42. If '*' means '+' 'Δ' means '×' '$\square$' means '–' and '∇' means '÷', then

$24\nabla 8\square 3\Delta 9*24 =$

(A) 24 (B) 3 (C) 1 (D) 0

Ans. ***(D)***

Sol. $24 \nabla 8 \square 3 \Delta 8 \times * 24 = ?$

$= 24 \div 8 - 3 \times 9 + 24$

$= 3 - 3 \times 9 + 24$

$= 3 - 27 + 24$

$= 0$

43. I reached the station half an hour before the scheduled time of the train. The train arrived at the station at 6:20 O'clock, 1:30 hour's delayed from its scheduled time. When I reached the station?

When I reached the station?

(A) 4:40 O' clock (B) 5:20 O' clock (C) 4:20 O' clock (D) None of these

Ans. ***(C)***

Sol. train arrived at 6 : 20

Scheduled time = 4 : 50

I reached station at 4 : 20 O'clock

(C) 4:20 O' clock

44. In a house a new person enters at every one hour, and at every four hour a person the house. If this process starts at 10 AM, then how many people will be there in the house at 10:30 PM?

(A) 5 (B) 9 (C) 7 (D) None of these

Ans. ***(B)***

Sol. 10 AM to 10 PM

Total 12 hours

$= 12 - 3$

$= 9$

45. In a row of 26 students, A is 15th from the left while B is 15th from the right , then how many students are between B and A?

(A) 3 (B) 2 (C) 1 (D) 0

Ans. ***(B)***

Sol. 11 B 2 A 11

46. A, B, C, D, E are five rivers, A is smaller than but longer than E. C is longest. D is smaller than B but longer than A. Which is the smallest river among them?

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

Ans. ***(D)***

Sol. C > B > D > A > E

47. Arrange the following in a meaningful sequence of events.

1. Consulation 2. Illness 3. Doctor 4. Treatment

5. Recovery

(A) 2, 3, 1, 4, 5 (B) 5, 3, 2, 1, 4 (C) 1, 2, 3, 4, 5 (D) None of these

Ans. ***(A)***

Sol. 2, 3, 1, 4, 5

48. Arrange the following in a meaningful sequence.

1. Face 2. Skull 3. Neck 4. Shoulder

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

Ans. ***(C)***

Sol. Skull $\rightarrow$ Face $\rightarrow$ Neck $\rightarrow$ Shoulder

2, 1, 3, 4

49. Raman's salary was decreased by 50% and subseqently increased by 50%. How much did he lose?

(A) 0% (B) 25% (C) 50% (D) None of these

Ans. ***(B)***

Sol. % He lose $= -50 + 50 + \frac{50 + (-50)}{100} = -25\%$

$\therefore$ He loose 25% (B)

Formula $\left[\text{Net \% change} = x + y + \left(\frac{xy}{100}\right)\right]$

50. After six years Akshay's age will be thre seventh of his fahter's age. Ten years ago, the ratio of their ages was 1:5,. What is the present age of Akshay's father?

(A) 45 years (B) 48 years (C) 50 years (D) None of theese

Ans. ***(C)***

Sol.

	Akshay	Father
Present Age	$\frac{3}{7}(x+6)-6$	x
6 years later	$\frac{3}{7}(x+6)$	$(x+6)$
10 years ago	$\frac{3}{7}(x+6)-6-10$	$x-10$

$$\left(\frac{\frac{3x}{7}+\frac{18}{7}-16}{x-10}\right)=\frac{1}{5}$$

$$\frac{3x}{7}\times 5-\frac{94}{7}\times 5=x-10$$

$$\frac{15x}{7}-x=\frac{470}{7}-10$$

$x = 50$ years

Present age of father is 50 years (C)

Direction (From Q.No. 51 to 53) : There are six members in a family who are placed in increasing order of their age. Difference of ages between two youngest members is 5 years. Difference in ages of fourth and fifth is 30 years. Difference of ages of last two members is 3 years. Ages of third and oldest members are 30 years and 68 years respectively. Difference of ages of first and fourth member is 32 years.

51. Difference in ages (in years) of second and fourth members is

(A) 27 (B) 32 (C) 5 (D) 30

Ans. ***(A)***

Sol. 27

52. Ages (in years) of youngest and fifth members are respectively:

(A) 8, 65 (B) 3, 65 (C) 3, 35 (D) 8, 35

Ans. ***(B)***

Sol. 3, 65

53. What is the difference between ages (in year) of oldest and youngest members?

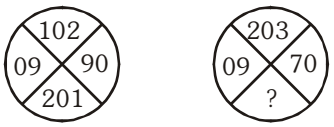
(A) 68 (B) 35 (C) 65 (D) 30

Ans. ***(C)***

Sol. 65

Direction (From Q. No. 54 to 58) : Choose the missing number (?) from the given alternatives.

54.



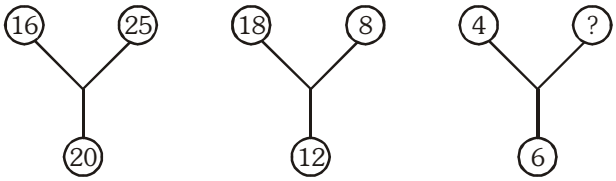
(A) 280 (B) 303 (C) 362 (D) 382

Ans. ***(A)***

Sol. $9 + 102 + 90 = 201$

$203 + 7 + 70 = 280$

55.



(A) 8 (B) 9 (C) 12 (D) 20

Ans. ***(B)***

Sol. $\sqrt{16\times25} = \sqrt{400} = 20$

$\sqrt{18\times8} = \sqrt{144} = 12$

$\sqrt{4\times9} = \sqrt{36} = 6$

56.

5	9	7
4	5	3
1	6	8
40	100	?

(A) 60 (B) 90 (C) 50 (D) 80

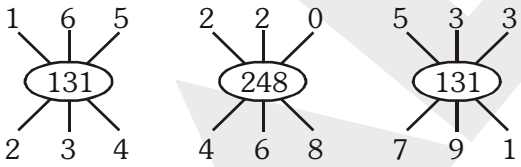
Ans. ***(C)***

Sol. $(5)^2 + (4)^2 - 1 = 40$

$(9)^2 + (5)^2 - 6 = 100$

$(7)^2 + (3)^2 - 8 = 50$

57.



(A) 320 (B) 274 (C) 262 (D) 432

Ans. ***(C)***

Sol. $|2-1|$ $|6-3|$ $|5-4|$

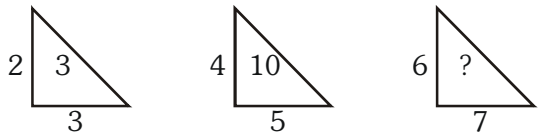
$\downarrow$ $\downarrow$ $\downarrow$

1 3 1

$|4-2|$ $|6-2|$ $|8-0|$ $|7-5|$ $|9-3|$ $|3-1|$

$\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$

2 4 8 2 3 1

58. 

(A) 21 (B) 22 (C) 24 (D) 32

Ans. ***(A)***

Sol. $\frac{2\times3}{2} = 3$

$\frac{4\times5}{2} = 10$

$\frac{6\times7}{2} = \frac{42}{2} = 2$

Direction (From Q.No.59 to 60) : In each of the following questions an Assertion (A) followed by a Reason (R) is given.

Choose the correct alternative from the following:

I. If both (A) and (R) arc true and (R) is the correct explanation of (A)

II. Both (A) and (R) arc true but (R) is not the correct explanation of (A)

III. (A) is true but (R) is false.

IV. (A) is false but (R) is true.

59. Assertion (A): India is a sovereign country.

Reason (R): Its Parliament is based in Delhi.

(A) I (B) II (C) III (D) IV

Ans. ***(B)***

Sol. II

60. Assertion(A) : Very few countries can send their satellite on moon.

Reason (R) : Very few countries have money to send satellite.

(A) I (B) II (C) III (D) IV

Ans. ***(B)***

Sol. II

Direction (From Q.No. 61 to 62)

In each of the following questions one statement and two arguments (I) and (II) are given. Choose the correct alternative from the following :

(A) Only argument (I) is strong.

(B) Only argument (II) is strong.

(C) Neither argument (I) nor argument (II) is strong

(D) Both the arguments (I) and (II) are strong

61. ***Statement :*** Should non-vegetarian food be totally banned in our country?

Arguments: (I) Yes. It is expensive and therefore it is beyond the means of most people in our country.

(II) No. Nothing should be banned in a democratic country like ours.

Ans. ***(B)***

Sol. Only argument (II) is stong

62. ***Statement :*** Should all the foreign banks be asked to close down their operations in India?

Arguments: (I) Yes. This is the only way to make the Indian banks survive and prosper.

(II) No. This will have an adverse effect on Indian economy.

Direction (From Q.No. 63 to 64)

In each of the following questions one statement and two conclusions (I) and (II) are given. Choose the correct alternative from the following:

(A) Only conclusion (I) follows.

(B) Only conclusion (II) follows.

(C) Both the conclusion (I) and (II) follows.

(D) Neither conclusion (I) nor conclusion (II) follows.

Ans. ***(C)***

Sol. Neither argument (I) nor argument (II) is strong.

63. ***Statement:*** Morning walk is good for health.

Conclusion: (I) All healthy people go for morning walk.

(II) Evening walk is harmful.

Ans. ***(D)***

Sol. Neither conclusion (I) nor (II) follows

64. ***Statement:*** Separate schools are established for boys and girls.

Conclusion: (I) Girls are much talkative.

(II) There are difference in studies of boys and girls.

Ans. ***(D)***

Sol. Neither conclusion (I) nor (II) follows

Direction (From Q.No. 65 to 66)

In each of the following questions two statements (I) and (II) are given. There may be cause and effect relationship between the two statements. Read both the statements and mark your answer as.

(A) If statement (I) is the cause and statement (II) is its effect.

(B) If statement (II) is the cause and statement (I) is its effect.

(C) If both the statements (I) and (II) are independent causes.

(D) If both the statements (I) and (II) are effects of independent causes.

65. ***Statement:*** (I) It is the target of the civic committees of the city to reduce the air pollution 20% in the next two months.

Statement: (II) The number of asthma cases in the city is constantly increasing.

Ans. ***(D)***

Sol. IF statement (II) is the cause and statement (I) is the effect.

66. ***Statement:*** (I) In the months of summer many people left the city to go to their native place.

Statement: (II) Many tourists have conjoined the city in the months of summer.

Direction (From Q.No. 67 to 71)

in each of the following questions one question and two statement (I) and (II) are given. You have to decide whether the data provided in the statement are sufficient to answer the questions.

Read both the statements and choose the correct alternative from the following:

(A) (I) alone is sufficient.

(B) (II) alone is sufficient.

(C) Both (I) and (II) together are sufficient but not alone.

(D) (I) and (II) together are also insufficient.

Ans. ***(D)***

Sol. If both the statements (I) and (II) are effect of indepentent cause

67. Whether the student Sumit of class 12th is hero of his school?

Statement: (I) Sumit's father donate much to the school.

Statement: (II) Sumit performs best in all programs of school including study.

Ans. ***(B)***

Sol. (II) alone is sufficient

68. The total of presents ages of A, B, C and D is 96 years. What is B's present age?

Statement: (I) The average age of A,B and D is 20 years.

Statement: (II) The average age of C and D is 25 years.

Ans. ***(D)***

Sol. $A + B + C + D = 96$

(I) $\frac{A+B+D}{3} = 20$

$A + B + D = 60$

$60 + C = 96$

$C = 36$

(II) $\frac{C+D}{2} = 25$

$C + D = 50$

$D = 50 - C$

$D = 50 - 36$

$D = 14$

Ans (D) (I) and (II together are alos insufficent

69. How many teachers are there in the two states C and M?

Statement: (I) C has 2000 less teachers than M.

Statement: (II) M has double teachers of C.

Ans. ***(B)***

Sol. C = M – 2000 ..... (1)

M = 2C ..... (2)

C = 2C – 2000

C = 2000

Both (I) and (II) together are sufficent but not alone.

70. What is the value of x when x.y = 18?

Statement: (I) x > y and y is an odd number.

Statement: (II) x and y are different from 1.

Ans. ***(C)***

Sol. x,y = 18

2	18
3	9
3	3
1	1
	1

18 = 2 × 9; (x = 9, y = 2)

= 6 × 6; (x = 6, y = 3)

Both (1) and (2) are together sufficient but not alone

71. R's birthday is on which day of the week?

Statement: (1) R celebrates his birthday after Monday but before Saturday.

Statement: (II) R's sister went for his birthday after Wednesday.

Ans. ***(D)***

Sol. Tue wed, Thur Fri, Sat

(I) & (II) together are alos inufficient.

Direction (From Q.No. 72 to 73)

In each of the following questions a statement followed by two courses of action (I) and (II) are given. You have to assume everything in the statement is true, then decide which of the suggested courses of action logically follows. Choose the alternative:

(A) If only (I) follows. (B) If only (II) follows.

(C) If both (I) and (II) follows. (D) If neither (I) nor (II) follows.

72. Statement: Rain is continuously getting down.

Courses of action : (I) Cutting tree should be stopped.

(II) Attention should be given on water conservation.

Ans. ***(C)***

Sol. If both (I) and (II) follows

73. Statement: The officer incharge of a company suspected that some money was missing from the vault.

Courses of action: (I) He should get it recounted with the help of staff and check it with the balance sheet.

(II) He should inform the police.

Ans. ***(A)***

Sol. If only (I) follows

Direction (From Q.No. 74 to 75)

In each of the following questions one statement and two assumptions (I) and (II) are given. Decide which of the assumptions is implicit in the statement. Give answer:

(A) If only assumption (I) is implicit. (B) If only assumption (II) is implicit.

(C) If either (I) or (II) is implicit. (D) If neither (I) nor (II) is implicit.

74. Statement: "If you break discipline of the school, you will be expelled from the school"- a teacher told to a student.

Assumptions: (I) All students do not like discipline.

(II) Examination result of the school will be better.

Ans. ***(D)***

Sol. If neither (I) nor (II) is implicit

75. Statement: It is faster to travel by air from Delhi to Banglore.

Assumptions: (I) Banglore and Delhi is connected by air.

(II) There are no other means of transport available from Delhi to Banglore.

Ans. ***(A)***

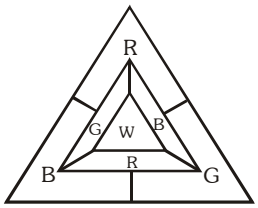
Sol. If only assumption (I) is implicit

76. A minimum of how many colours will be required to colour the given figure, so that no two adjoining portions in the given figure may have the same colour.

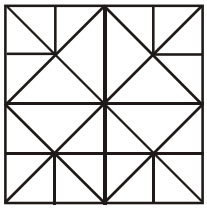
(A) 2 (B) 9 (C) 3 (D) 4

Ans. ***(D)***

Sol.



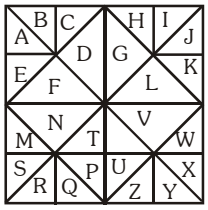
77. Find the number of squares in the given figure:



(A) 9 (B) 16 (C) 8 (D) None of these.

Ans. ***(B)***

Sol.



AB, IJ, SR, QP, UZ, XY = 6

FN, DG, LV, OT PU = 4

FGGLVUPON = 1

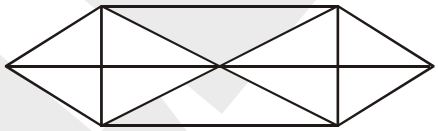
ABCDEF, GHIJKL, TVWXYUZ

MNOPQRS = 4

A to Z = 1

Toal = 6 + 4 + 1 + 4 + 1 = 6

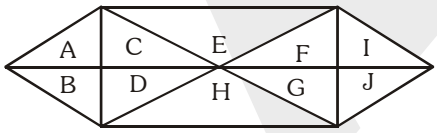
78. How many triangles are there in the following figure?



(A) 21 (B) 22 (C)19 (D) None of these.

Ans. ***(B)***

Sol.



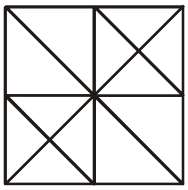
A, B, C, D, E, F, G, H, I, J = 10

AC, CD, BD, AB, FI, IJ, GJ, FG = 8

CDH, FGH, CDE, EFG = 4

total = 22

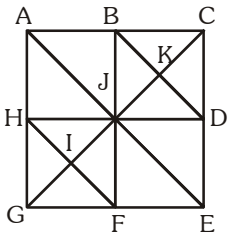
79. Find the minimum number of straight lines required to make the given figure



(A) 10 (B) 12 (C) 8 (D) None of these.

Ans. ***(A)***

Sol.

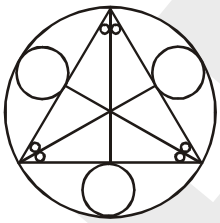


Vertiical lines = AC, HD, GE, = 3

Horizontal = AG, BF, CF = 3

Slanting = HF, AE, BD, CG = 4

80. How many circles are there inside the triangle in the following figure?

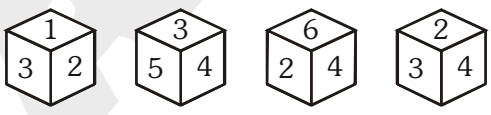


(A) 9 (B) 6 (C) 10 (D) None of these.

Ans. ***(B)***

Sol. By observation

81. A dice is thrown four times and its four different positions are given below. Find the number on the face opposite to 2.



(A) 3 (B) 4 (C) 5 (D) 6

Ans. ***(3)***

Sol. From dice (1) 3 –1 – 2 ***2***

From dice (2) 3 – 4 – ***5***

82. A dice is numbered 1 to 6 in such a way that 1 is adjacent to 2,4, and 6. Then which of the following statement is necessarily true?

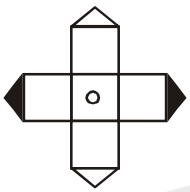
(A) 3 is opposite to 5 (B) 2 is opposite to 6

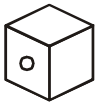
(C) 1 is adjacent to 3 (D) 3 is adjacent to 5

Ans. ***(D)***

Sol. If 1 is adjacent to 2, 4 and 6 then either or 5 lies opposite to 1. So, the numbers 3 and 5 cannot lie opposite to each other. Hence 3 is adjacent to 5 (necessarily)

83. The sheet of paper shown in the following figure is folded to form a box. Choose the alternative that is similar to the box that will be formed

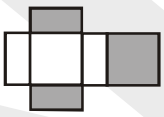


(A)  (B)  (C)  (D) 

Ans. ***(D)***

Sol. By observation

84. The sheet of paper shown in the following figure is folded to form a box, Choose the alternative that is similar to the box that will he formed?



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

(A) (1) and (3) only (B) (2) and (3) only (C) (2) and (4) only (D) (1) and (4) only.

Ans. ***(A)***

Sol. By observation

85. Three positions of a dice are shown below. How many dots are contained on the face opposite to that containing four dots?

(A) 2 (B) 3 (C) 5 (D) 1

Ans. ***(C)***

Sol. From dice (2) 4 – 2 – 1

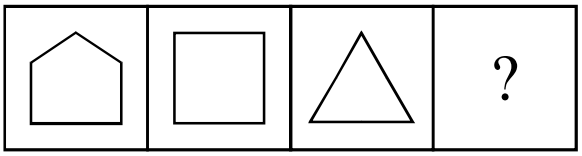
From dice (3) 4 – 3 – 6

1 is opption to 6

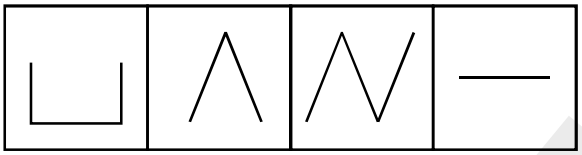
2 is opption to 3

4 is opption to 5

86. Choose the correct alternative in place of question mark (?), which will continue the series.



Answer figures :

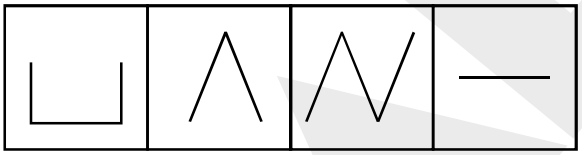


(A) (B) (C) (D)

Ans. ***(B)***

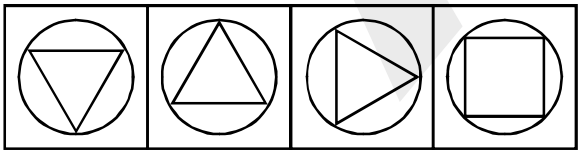
Sol. By observation

87. Choose the correct alternative in place of question mark (?), which will continue the series.



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

Answer figures :

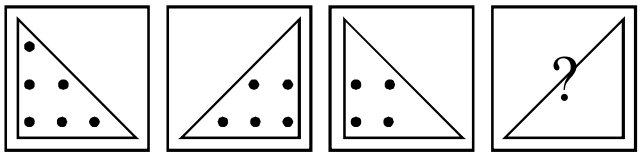


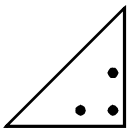
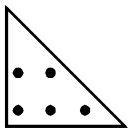
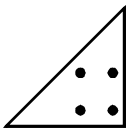
(A) (B) (C) (D)

Ans. ***(A)***

Sol. By observation

88. Choose the correct alternative in place of question mark (?), which will continue the series.



(A)  (B)  (C)  (D) None of these

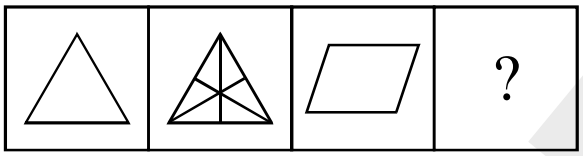
Ans. ***(A)***

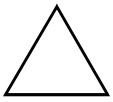
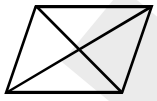
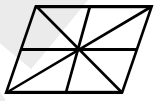
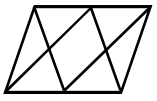
Sol. By observation

Direction (From Q.No. 89 to 90)

In the following question, figures (1) and (2) are related in a particular manner. Establish the same relationship between figures (3) and (4) by choosing a figure from amongst the alternatives, which replace question mark in figure(4).

89.

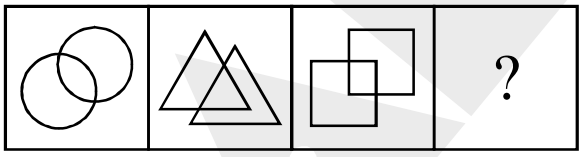


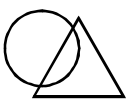
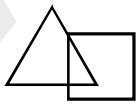
(A)  (B)  (C)  (D) 

Ans. ***(B)***

Sol. By observation

90.



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

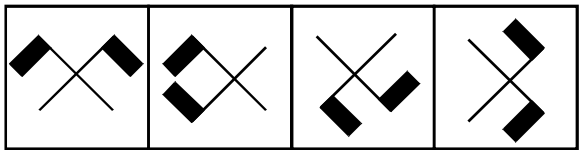
Ans. ***(C)***

Sol. By observation

Direction (From Q.No. 91 to 92)

In the following questions, out of the four figures marked as (A), (B), (C) and (D), three are similar in a certain manner, but, one is different from other. Choose the figure which is different from others.

91.

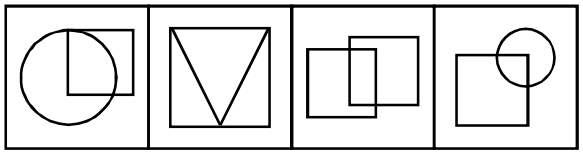


(A) (B) (C) (D)

Ans. ***(C)***

Sol. By observation

92.



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

Ans. ***(C)***

Sol. By observation

93. Choose the alternative which most closely resembles the mirror image of the given combination :

A B 6 C G 9 3

(A) Ɛ ϱ Ǝ Ↄ ə Я A (B) 3 9 G C 6 B A (C) A B ə Ↄ Ǝ ϱ Ɛ (D) Ɛ ϱ Ǝ ə Ↄ Я A

Ans. ***(A)***

Sol. A B 6 C G 9 3 ‖ Ɛ ϱ Ǝ Ↄ ə Я A

94. Choose the alternative which most closely resembles the mirror image of the given combination :

D H Y A N 7 8

(A) ᗡ H Y A И ᒣ 8 (B) 8 ᒣ И A Y H ᗡ (C) D H ʎ ∀ N ᒣ 8 (D) 8 7 И A Y H ᗡ

Ans. ***(B)***

Sol. D H Y A N 7 8 ‖ 8 ᒣ И A Y H ᗡ

95. Choose the alternative which most closely resembles the mirror image of the given combination :

P Q 8 A F 5 B Z 9

(A) 6 Z Я 5 Ⅎ ∀ 8 Ό d (B) Ь Ό 8 ∀ Ɛ ϱ Я Ƹ ə (C) Ь Ό 8 ∀ F ϱ Я Ƹ ə (D) None of these

Ans. ***(B)***

Sol. P Q 8 A F 5 B Z 9 / Ь Ό 8 ∀ Ɛ ϱ Я Ƹ ə

96. Choose the alternative which most closely resembles the mirror image of the given combination :

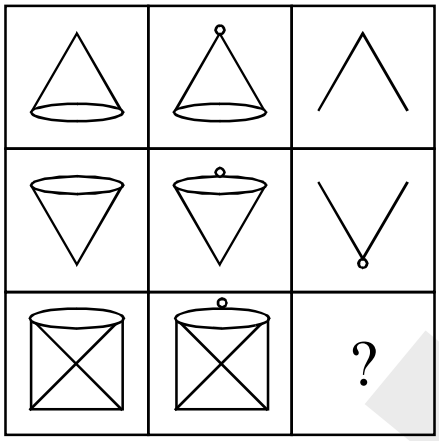
6 3 A M A N 4 8

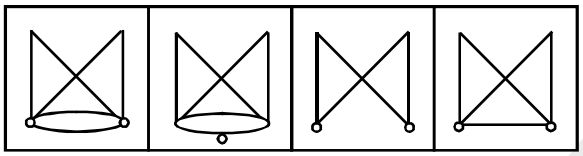
(A) 8 4 N A M A 3 6 (B) 8 ⊬ N ∀ W ∀ Ɛ 9 (C) ϱ 3 ∀ W ∀ И ⊬ 8 (D) ϱ 3 ∀ W ∀ N ⊬ 8

Ans. ***(C)***

Sol. $\frac{6\ 3\ A\ M\ A\ N\ 4\ 8}{\varrho\ 3\ \forall\ W\ \forall\ И\ \vdash\ 8}$

97. Select a suitable figure from the given alternatives that would complete the figure matrix :



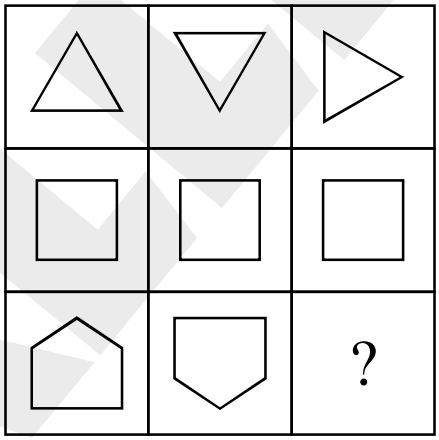


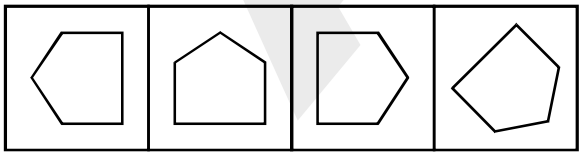
(A) (B) (C) (D)

Ans. ***(D)***

Sol. By observation

98. Select a suitable figure from the given alternatives that would complete the figure matrix :



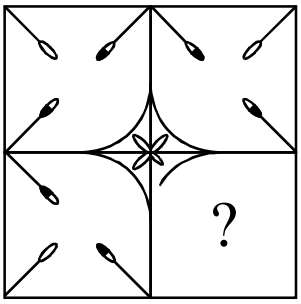


(A) (B) (C) (D)

Ans. ***(C)***

Sol. By observation

99. Select a figure in place of (?) from amongst the given alternatives, which would complete the pattern of the Question figure:

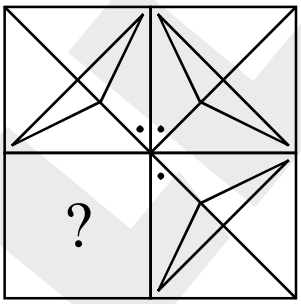


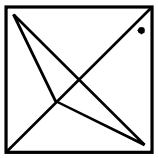
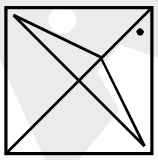
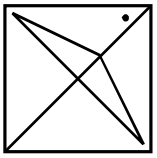
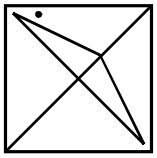
(A)  (B)  (C)  (D) 

Ans. ***(C)***

Sol. By observation

100. Select a figure in place of (?) from amongst the given alternatives, which would complete the pattern of the Question figure:



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

Ans. ***(B)***

Sol. By observation.