Max. Marks: 50   **SOLUTIONS**   **Time allowed: 45 mins**

Directions: In question nos 1 to 5 there is a number series with one term missing shown by Question mark (?) This term is one of the alternative given. Choose that number.

1.   2,5,11,23,47,?

(A) 77   (B) 97   (C) 95   (D) 85

Ans. (C)

Sol. 2,5,11,23,47,?

$2 \times 2 + 1 = 5$

$11 \times 2 + 1 = 11$

$23 \times 2 + 1 = 47$

$470 + 2 + 1 = 95$

2.   3,15,4, 16, 5, 17, 6, ?, 7

(A) 12   (B) 13   (C) 15   (D) 18

Ans. (D)

Sol.   3, 15, 4, 16, 5, 17, 6, 18, 7

Alternetively, divide into two series

3, 4, 5, 6, 7 and 15, 16, 17, 18

3.   2, 6, 12,20,30, ?

(A) 46   (B) 48   (C) 42   (D) 40

Ans. (C)

Sol. 2, 6, 12, 20, 30 42

Add, +4, +6, +8, +10, +12

4.   68,81,96, ?, 132

(A) 105   (B) 110   (C) 113   (D) 130

Ans. (C)

Sol. 68, 81, 96, ? , 132

Add : + 13, + 15 , +17, +19

5.   1,1,6,6, 11 ,11, 16, ?, ?

(A)16, 21   (B) 13, ,11   (C) 17,21   (D) 21,16

Ans. (A)

Sol. 1,1, 6, 6, 11, 11, 16, ? , ?

Alternate, divide into

two series....

1, 6, 11, 16, 21 and 1, 6, 11, ? 16

Add 5 to first and second series

Directions: In Question no. 6-10, there is a question mark in the blank space and it is only one of satisfies the same relation as is found between the two patterns to the left of the sign :: given in the question. Find the correct alternative.

6. Elbow :wrist:: knee: ?

(A) Ankle   (B) Fingers   (C) Foot   (D) Toes

Ans. (A)

Sol. Elbow : wrist : : knee : $\boxed{\text{Ankle}}$

7. Food: stomach : : fuel : ?

(A) Automobile   (B) Engine   (C) Tmck   (D) Plane

Ans. (B)

Sol. Food : Stomach : : Fuel : $\boxed{\text{Engine}}$

8. Wine: grapes : : vodka:?

(A) Apples   (B) Potatoes   (C) Oranges   (D) Flour

Ans. (B)

Sol. Wine : Grapes : : Votka : $\boxed{\text{Potato}}$

(Hint: Votka made up by grain also)

9. BVSC : YEHX:: MRCP: ?

(A) NJXK   (B) LKXM   (C) NIXK   (D) DIYM

Ans. (C)

Sol. From the left and right ends in English alphabets

In BVSC : YEHX

2nd,	5th,	8th,	3rd
from left	from right	from right	from left

In MRCP: ?

13th,	9th,	3rd,	11th
from left	from right	from left	from right

Sol. BVSC : YEHX : : MRCP : $\boxed{\text{NIXK}}$

10. 211 : 333 : : 356 : ?

(A) 358   (B) 359   (C) 423   (D) 388

Ans. (D)

Sol. 211 : 333 : : 356 : ?

Hint : 211 = 2 + 1 + 1 = 4

333 = 3 + 3 + 3 = 9

difference = 9 – 4 = 5
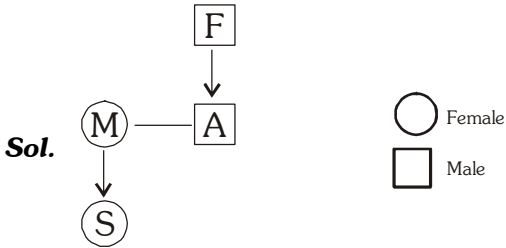
Also 356 = 3 + 5 + 6

= 14

$\boxed{388}$ = 3 + 8 + 8 = 19

difference = 19 – 14 = 5

11. Sunita's mother is the only daughter of Ajay's father. What is the relation of Ajay with Sunita?

(A) Brother　　　　(B) Paternal uncle　　　　(C) Maternal uncle　　　　(D) Father

Ans. *(C)*

Sol.

It means Ajay is the maternal uncle of sunita

12. Seema is older than Geeta, Ramesh is younger than Seema and Sujata. Sujata is younger than Geeta. Who is youngest'among all?

(A)Seema　　　　(B) Sujata　　　　(C) Geeta　　　　(D) Ramesh

Ans. *(D)*

Sol. Seema > Geeta

Ramesh < Seema and Sujata

Sujata < Geeta

In the all above relation : combining above information

Seema > Geeta > Sujata > Ramesh

So, Ramesh is youngest among all.

13. If the 5th February was Sunday, how many Mondays were there in that month?

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

Ans. *(B)*

Sol. 5th February – Sunday

∴ 6th February – Monday

After every 7 days , the monday comes as 13th , 20th 27th february.

So, the number of Mondays in the month of February will be *four.*

14. Amit is Daya's brother. Daya is the son of Chandra. Vimal is the father of Chandra then how is Amit related to Vimal?

(A) Grandson　　　　(B) Grandfather　　　　(C) Brother　　　　(D) Uncle

Ans. *(A)*

Sol.
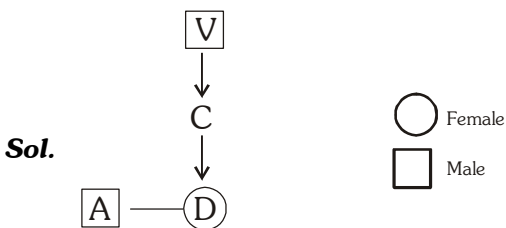
See, Amit (A) is the grandson of Vimal.

15. If today is Monday. After 61 days it will be -

(A) Wednesday   (B) Saturday   (C) Thursday   (D) Tuesday

Ans. *(B)*

Sol. Today is Monday

then after 61 days,

on $7 \times 8 = 56$ Monday will be these After 5 days,

SATURDAY wil be these.

16. Which of the following letter-group is different from other groups?

(A) SUT   (B) XAZ   (C) BOC   (D) M IN

Ans. *(B)*

Sol. XAZ

because, in SUT BOC and MON according to English alphabets S and T, B and C , M and N comes continueously but in XAZ, no alphabets is in continuation.

17. In a row of 35 students the place of Bobby is 12th from the beginning. The place of Ratan is 25th from the end. How many students are there between Bobby and Ratan?

(A) Zero (None)   (B) 1   (C) 3   (D) 2

Ans. *(A)*

Sol. Total = 35 students
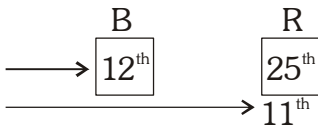
From beginning also Ratan will be at $35 - 25 + 1 = 11^{th}$ position. So this is no students.

18. Which of the following does not belong to others?

(A) Guitar   (B) Violin   (C) Flute   (D) Harp

Ans. *(C)*

Sol. Flute

because no use of wire in flute

19. The number of ways in which first, second & third Prizes can be given to 5 competitors.

(A) 30   (B) 60   (C) 45   (D) 125

Ans. *(B)*

Sol. There are three places

_____ ____ ____

First   Second   Third

For the first prize, all 5 competitors can came, for second prize only 4 competitors can come and for third prize, only

3 competitors can come, so the total number of ways will be $5 \times 4 \times 3 = \boxed{60}$

20. Kavita walks from A in the East 10 feet. Then she turns towards right and walks 3 feet. Again she turns towards right and walks 14 feet. How far is she from A now?

(A) 27 feet　　　　　(B) 24 feet　　　　　(C) 5 feet　　　　　(D) 4 feet

Ans. (C)

Sol.
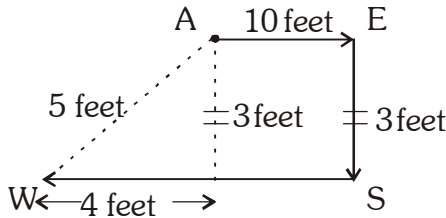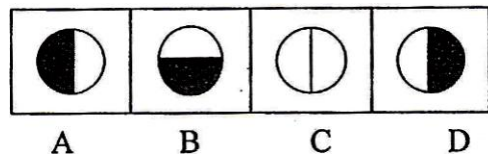

From figure 3, 4, 5 are the **Pythagorian Triplets.**

So, 5 feet is the required ans.

Directions: In Question Nos 21 to 25 there are two shapes in first part of the Question. Second part of the Question contains only one shape, choose 4th shape from answer shapes.

21. Question shapes -　　　　　　　　　　　　　Answer shapes -

Ans. (D)

Sol. The 4th figure will be

Half shaded in right side

22. Question shapes　　　　　　　　　　　　　Answer shapes -
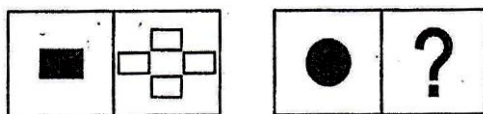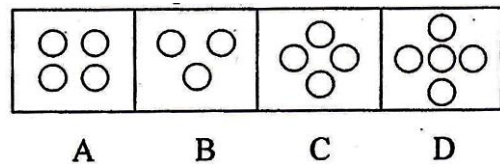
Ans. (C)

Sol. The 4th figure will be only four circles arranged in a circular form.

23. Question shapes-　　　　　　　　　　　　　Answer shapes -
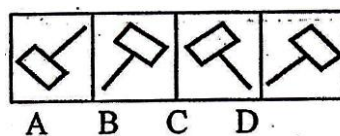
Ans. (D)

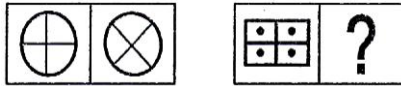**Sol.** The fourth figure will be the rotation of 135° in ACW direction

24. Question shapes -

Answer shapes -
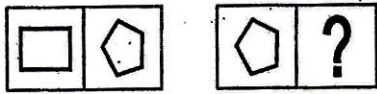
Ans. (C)

Sol. The 4th figure will be in Hexagonal shape
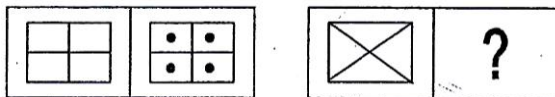
25. Question shapes -

Answer shapes -

Ans. (B)

Sol. The 4th figure will be the rotation of interior shape only while the exterior shape is constant.

Directions: Question Nos 26 to 30 have a certain relation with each other in first two figures. Bearing that relationship in mind, pick up the fourth figure from the answer figures -

26. Question shapes -

Answer shapes -

Ans. (B)

Sol. The 4th figure, put the dots.

27. Question shapes -

Answer shapes -

Ans. (D)

Sol. The 4th figure, shaded triangle in same shape.

28. Question shapes -

Answer shapes -

Ans. (D)

Sol. The 4th figure, remove length of rectangle, in ACW direction.

29. Question shapes -

Answer shapes -

Ans. (C)

Sol. The 4th figure, remove dots.
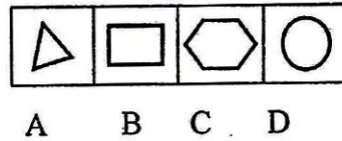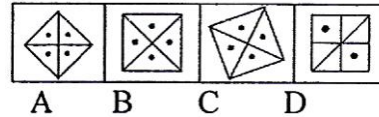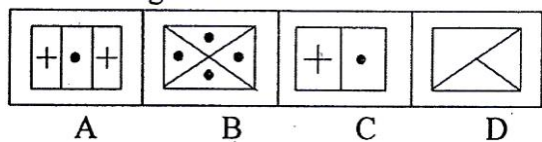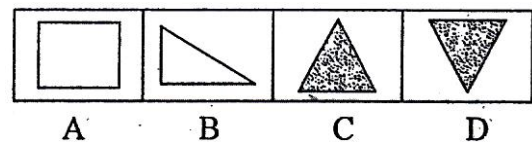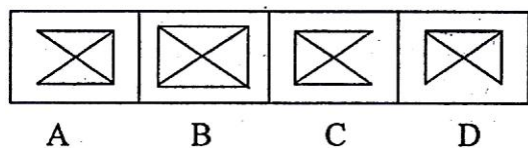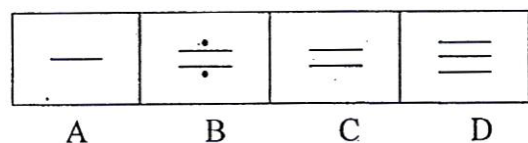
30. Question shapes -
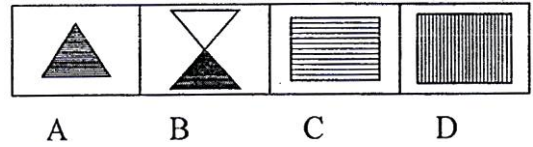

Answer shapes -

A B C D
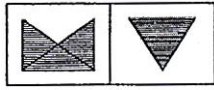
Ans. (C)

Sol. The fourth figure, incomplete part will be the embedded with the same shaded shape.

On the basis of following arrangement give answers of 31 to 35 -

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

31. Which digit is the 5th left of 12th from right?

(A) 3　　　　(B) 1　　　　(C) 2　　　　(D) 7

Ans. (N.A.)

Sol. (Controvercial) See 12th from right is 2 and the fifth left of 2 is 6 but in the given option, 6 is not there.

32. How many 5 are there in the arrangement immediate after which is the digit smaller than 5?

(A) None　　　　(B) One　　　　(C) Two　　　　(D) Three

Ans. (C)

Sol. 1 8 5 9 4 7 1 2 5 8 3 6 5 9 2 7 6 4 $\boxed{5 , 2}$ 9 2 6 4 1 2 3 $\boxed{5 , 1}$ 4 2 8 3

33. How many 4 are there having an even number immediate before it and odd number immediate after it?

(A) None　　　　(B) One　　　　(C) Two　　　　(D) Three

Ans. (C)

Sol. 1 8 5 9 4 7 1 2 5 8 3 6 5 9 2 7 $\boxed{6 , 4 , 5}$ 2 9 2 $\boxed{6 , 4 , 1}$ 2 3 5 1 4 2 8 3

34. After removing all even numbers 7th number from left of the arrangement is-

(A) 9　　　　(B) 5　　　　(C) 1　　　　(D) 3

Ans. (D)

Sol. After removing all even numbers

1, 5, 9, 7, 1, 5, $\boxed{3}$, 5 , 9 , 7 , 5 , 9, 1, 3, 5, 1, 3

∴ 7th digit from the left is $\boxed{3}$
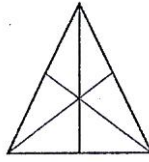
35. How many 1 are there in the arrangement having complete square immediate before it?

(A) None　　　　(B) One　　　　(C) Two　　　　(D) Three

Ans. (B)

Sol. 1 8 5 9 4 7 1 2 5 8 3 6 5 9 2 7 6 4 5 2 9 2 6 $\boxed{4 , 1}$ 2 3 5 1 4 2 8 3

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

(A) 8   (B) 12   (C) 14   (D) 16

Ans. (D)

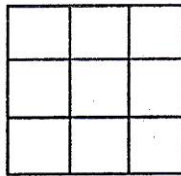**Sol.** Count sigle units, the number of triangles = 6

Count two units, the number of triangles = 3

Count three units, the number of triangles = 6

Count the large one = 1   (Add)

_____

So, the total number of triangles = 16

37. How many squares are there in the figure below?

(A) 14   (B) 16   (C) 10   (D) 20

Ans. (A)

Sol. Count the number of single units = 9

Count the number of fourth units = 4
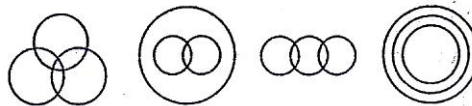
Count the number of bigger one units = 1   (Add)

= 14

or Total number of squances = $1^2 + 2^2 + 3^2 =$ $\boxed{14}$

38. Given below are four diagrams represented as A, B, C and D from the following diagrams which diagram represent a correct relationship between these words given below?
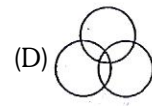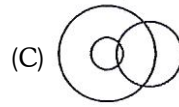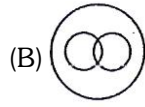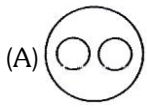
Women, Teacher, Doctor

A   B   C   D

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

Ans. (C)

Sol. The appropriate figure is (C). Teacher and Doctor are different profession and women is common to both.
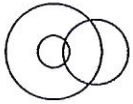
39. Choose the diagram that illustrates the relationship of females, mothers & postgraduates.
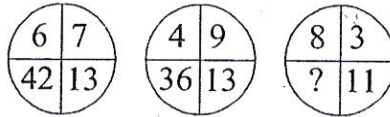
(A)   (B)   (C)   (D)

Ans. *(C)*

Sol. The appropriate figure is (C). All mothers are females and some females and mothers are post graduates.

40. Choose the correct option in the following.

(A) 30   (B) 24   (C) 18   (D) 12

Ans. *(B)*

$$\begin{vmatrix} 6+7=42 \\ 6+7=13 \end{vmatrix} \quad \begin{vmatrix} 4\times9=36 \\ 4+9=13 \end{vmatrix} \quad \begin{vmatrix} 8\times3=\boxed{24} \\ 8+3=11 \end{vmatrix}$$

Directions: In Question Nos 41 to 45, select the related letter/word/number from the given alternatives:
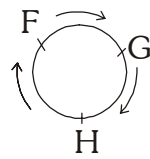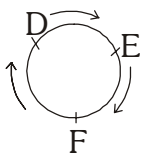
41. DEF : EFD : : FGH : ?

(A) FHG   (B) HGF   (C) HFG   (D) GHF

Ans. *(D)*

Sol. DEF : EFD : : FGH : ?

They are in cyclic order, so GHF is the required answer.

42. AZB : CYD : : EXF : ?

(A) GWH   (B) FGV   (C) TMR   (D) QSV

Ans. *(A)*

Sol.

43. Maharashtra : India : : Texas : ?

(A) Canada   (B) Mexico   (C) Brazil   (D) U.S.A.

Ans. *(D)*

Sol. Texas state in USA

44. Heart : Cardiologist : : Kidney : ?

(A) Endocrinologist   (B) Orthodontist   (C) Nephrologist   (D) Neurologist

Ans. *(C)*

Sol. Kidney specialist is known as Nephrologist

45. 5 : 36 : : 6 : ?

(A) 48   (B) 49   (C) 50   (D) 56

Ans. *(B)*

Sol. $5 : (5 + 1)^2 : : 6 : (6 + 1)^2$

So , 49 is the ans.

46. In a certain code PAINT i.s coded as RCKPV and STOMP is coded as UVQOR. What will be the code of HELPS?

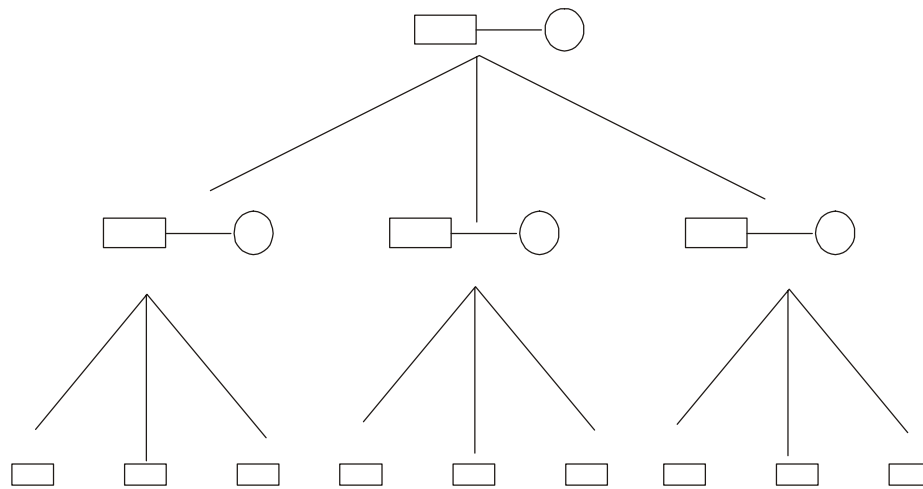(A) JGNRU   (B) GJNRU   (C) KONRU   (D) JGNSU

Ans. *(A)*

Sol.

47. A family consisted of a man, his wife, his three sons, their wives and three children in each son's family. How many members are there in the family?

(A) 12   (B) 13   (C) 15   (D) 17

Ans. *(D)*

Sol.

Total number of family members = 17

48. Last day of a century cannot be -

(A) Monday　　　　　　(B) Friday　　　　　　(C) Tuesday　　　　　　(D) Sunday

Ans. *(C)*

Sol. Last day of a century may be FRI , WED, MON or SUN

So , TUESDAY cannot be a last day of century

49. $1\dfrac{1}{5}$ of $1\dfrac{1}{2}$ of which number is 216 ?

(A) 100　　　　　　(B) 120　　　　　　(C) 140　　　　　　(D) 180

Ans. *(B)*

Sol. Let the required number be x

$$\dfrac{6}{5}\times\dfrac{3}{2}\times x = 216$$

$$\dfrac{9x}{5} = 216$$

$$x = 120$$

50. A 25 feet 6 inches long piece of wood is cut to make three pieces of equal length. The length of each piece is-

(A) 8 ft. 1 inches　　(B) 8 ft. 6 inches　　(C) 8 ft. 3 inches　　(D) 8 ft. 4 inches

Ans. *(B)*

Sol. 1 feet = 12 inches

25 feet = 25×12 = 300 inches

So, 25 feet 6 inches = 306 inches

(Divided it by 3)

So, the length of each piece = 102 inches

$\dfrac{102}{12}$ =8feet 6 inches