## Classroomヤィ

## IBPS RRB Officer Scale-1

## Prelims 2019 Question

## Paper

Direction (1-4): In these questions, the relationship between different elements is shown in the statements. These statements are followed by two conclusions:

## 1. Statements:

A < N < D > R; E > D < W
Conclusions:
I. $\mathrm{W}>\mathrm{A}$
II. $A=W$
A. If either conclusion I or II follows.
B. If neither conclusion I nor II follows.
C. If only conclusion II follows.
D. If both conclusion I and II follow.
E. If only conclusion I follow.

## 2. Statement:

P<O<L<E=S>A

## Conclusions:

I. $\mathrm{A}<\mathrm{O}$
II. $S>P$
A. If either conclusion I or II follows.
B. If neither conclusion I nor II follows.
C. If only conclusion II follows.
D. If both conclusion I and II follow.
E. If only conclusion I follow.
3. Statement:
$\mathrm{M}<\mathrm{O}<\mathrm{B}>\mathrm{I}=\mathrm{L}>\mathrm{E}$

## Conclusions:

I. $\mathrm{B}<\mathrm{E}$
II. L > M
A. If both conclusion I and II follow.
B. If neither conclusion I nor II follows.
C. If either conclusion I or II follows.
D. If only conclusion II follows.
E. If only conclusion I follows.

## 4. Statements:

A < N < D > R; E > D < W
Conclusions:
I. $\mathrm{E}>\mathrm{N}$
II. $\mathrm{R}<\mathrm{W}$
A. If only conclusion I follows.
B. If either conclusion I or II follows.
C. If only conclusion II follows.
D. If both conclusion I and II follow.
$E$. If neither conclusion I nor II follows.
Direction (5 - 10) : Study the information and answer the given questions:

Nine people M, N, P, Q, R, S, T, V and W are seating equidistance in a row and all are facing north. Exactly 3 persons sit to the left of $R$. One person sit between $M$ and $R$. $P$ sits third to the right of the $M$. As many people sit to the right of $P$ as to the left of S. Only 3 people sit between Q and $S$. $T$ sits $4^{\text {th }}$ to the left of the $W$. $N$ is one of the persons, who sit to the right of V.
5. Number of persons sitting between N and M
A. 1
B. 2
C. 3
D. 5
E. More than 5
6. Which of the following pair of persons are sitting at the extreme end?
A. $S$ and $P$
B. $P$ and $N$
C. Q and W
D. W and S
E. T and Q
7. Who is sitting $2^{\text {nd }}$ to the right of Q ?
A. M
B. W
C. N
D. P
E. T
8. Find the odd one out.
A. QV
B. NQ
C. SR
D. TW
E. MP
9. Which of the following is true?
A. 2 persons sit between $Q$ and $W$
B. More than 2 persons are left of $S$
C. None of the option is true
D. $T$ sits immediate right of $R$
$E$. $N$ is the second person from the right extreme end.
10. Who is sitting at the right end?
A. J
B. B
C. O
D. $P$
E. Q

Direction (11 - 13) : Study the information and answer the given questions.
Eight people A, B, C, D, E, F, G and H are seating equidistance around a circle. Some of them are facing inside and some are facing outside. H is sitting immediate right of $F$. 3 persons are sitting between $F$ and $C$. $C$ is sitting third to the left of $A$. $G$ is sitting immediate left of $A$. $C$ and $D$ both face centre. Immediate neighbors of $G$ face different direction. $B$ is sitting second to the left of $E$. Both immediate neighbors of $E$ faces same direction as $B$. Both immediate neighbors of $D$ face towards centre.
11. Find the odd one out.
A. D
B. C
C. A
D. H
E. E
12. Who is sitting $3^{\text {rd }}$ to the left of $E$ ?
A. F
B. G
C. D
D. C
E. A
13. Which of the following is not true?
A. $A$ is sitting second to the left of $B$.
B. 3 persons sit between $B$ and $G$
C. $H$ is an immediate neighbour of $D$
D. A face outside.
E. All are true

Direction (14-17) : In each of the questions below is given three statements followed by two conclusions numbered I and II. You have to take the given statements to be true even if they seem to be at variance with commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

## 14. Statements:

No dolphins is Latch
All trans are dolphins
No ship is a latch

## Conclusions:

1) At least some dolphins are ships
2) No dolphin is a ship
A. Only 1 follows
B. Either 1 or 2 follows
C. Only 2 follows
D. Both 1 and 2 follow
E. Neither 1nor 2 follows

## 15. Statements:

All nodes are toys
Only a few statues are nodes
All statues are cases.

## Conclusions:

1) All toys being statues is a possibility
2) Some nodes are definitely not cases
A. Neither 1 nor 2 follow
B. Either 1 or 2 follows
C. Both 1 and 2 follow
D. Only 1 follows
E. Only 2 follows

## 16. Statements:

No dolphins is Latch
All trans are dolphins
No ship is a latch

## Conclusions:

1) Some ships being trans is a possibility
2) No latch is a trans.
A. Either 1 or 2 follows
B. Neither 1 nor 2 follows
C. Only 1 follows
D. Both 1 and 2 follow
E. Only 2 follows

## 17. Statements:

All nodes are toys
Only a few statues are nodes
All statues are cases.

## Conclusions

1) All nodes are cases
2) No statue is a toy
A. Only 1 follows
B. Either 1 or 2 follows
C. Neither 1 nor 2 follows
D. Both 1 and 2 follow
E. Only 2 follows
18. How many such pairs of letters are there in the word "IMPERATIVE", each of which has as many letters between them in the word (in both forward and backward directions) as they have between them in the English alphabetical series?
A. Six
B. Seven
C. More than eight
D. Less than six
E. Eight
19. Change all the vowels of the word "PRECIOUS" to its next letters and all the consonants to its previous letters and then arrange them in alphabetical order. Which letter will be $4^{\text {th }}$ from the right?
A. J
B. B
C. O
D. P
E. Q
20. All the even value digits of the number '746238945' are increased by 1 and all the odd value digits are decreased by 1 , then what will be the sum of the 4 th number from the right and fifth number from left?
A. 8
B. 10
C. 15
D. 11
E. 12

Direction (21 - 25) : Study the information and answer the given questions:
10 people celebrate their birthday on 15th and 20th of 5 months- January, March, April, June and November. R celebrates birthday after Q. L celebrates his birthday on 15th of the month which has 31 days. Exactly 2 persons celebrate their birthdays between that of $L$ and $P$. Exactly 3 persons celebrate birthday between that of $P$ and $O$. $M$ celebrate birthday just before T but not in June or November. Also, both M and T celebrate a birthday in the same month. The number of persons celebrating a birthday before $O$ is same as the number of
persons celebrating birthday after N. Both $U$ and $S$ celebrate a birthday in the same month and $U$ celebrates a birthday before S.
21. Who celebrates a birthday on Apr 15th?
A. M
B. $L$
C. P
D. O
E. R
22. Who celebrates a birthday just after R?
A. L
B. T
C. N
D. O
E. M
23. Who celebrated her birthday before M?
A. Q
B. R
C. T
D. O
E. P
24. How many people celebrated their birthday between Q and O ?
A. 4
B. 5
C. 6
D. 2
E. None
25. Who celebrated their birthday just before P ?
A. N
B. Q
C. R
D. O
E. None of these

Direction (26-28) : Read the following information carefully and answer the questions which follow.
There are five buses $P, Q, R, S, T$ and they have different number of capacities not necessarily in the same order.

- $P$ has higher capacity than $S$ and $T$.
- R has less capacity than only Q.
- S carries more passengers than T .

26. If $R$ carry 62 Passengers then what would be the capacity of bus Q ?
A. 53
B. 24
C. 71
D. 49
E. None of these
27. Which bus has the least capacity?
A. Q
B. $P$
C. R
D. $T$
E. None of these
28. If P carry 25 passengers and T carry 9 passengers then what would be the capacity of $S$ which is divisible by 3 and not divisible by 5 ?
A. 15
B. 18
C. 20
D. 27
E. None of these

Direction (29 - 33) : Study the following information carefully and answer the questions.
In a certain code language,
'the capital of delhi ' is coded as 'jai veru miti viki'.
'many festival in delhi' is coded as 'viki, nic,dic,vij' .
'crowd in the capital' is coded as 'dic, veru, miti, sik'.
'season for festival' is coded as 'nis, tif,vij'.
'delhi for country' is coded as 'viki, noo, tif'.
29. What is the code of 'crowd'?
A. miti
B. sik
C. dic
D. tif
E. None of these
30. What can be the code of 'festival in india'?
A. vij, veru, zee
B. vij, miti, zee
C. vij, dic, sik
D. vij, dic, zee
E. None of these
31. What is the code for 'festival in india crowd capital'?
A. vij, dic, veru, sik, miti
B. vij, dic, jai, sik, miti
C. vij, dic, veru, sik, viki
D. vij, dic, mee, sik, tif
E. vij, dic, mee, sik, miti
32. What is the code of 'capital '?
A. 'vik' or 'miti'
B. 'veru' or 'miti'
C. 'nic' or 'miti'
D. 'vij' or 'dic'
E. None of these
33. If in a certain code language 'festival' is coded as 'vij' and 'in' is coded as 'dic' in same code language What will be the code of 'delhi' ?
A. viki
B. nic
C. sik
D. Can't be determined
E. None of these

Direction (34-35) : Study the following information carefully and answer the questions given below.
There are six members in a family. $F$ is the sister of E and A is the brother of C's husband. $B$ is the father of $D$ and grandfather of E . There are two brothers and two fathers in the family. C is married to B .
34. Who is F's mother?
A. E
B. $A$
C. B
D. Cannot be determined
E. None of these
35. If E is married to an outsider M , how is ' $F$ ' related to $M$ ?
A. Brother-in-law
B. Sister-in-law
C. Aunt
D. Grandmother
E. None of these

Direction (36-40): Read the following information carefully and answer the questions that follow.
$P, Q, R, S, T, U, V$, and $W$ are eight different boxes. They are arranged in such a manner that Box 1 is at the bottom, the box 2 is above it and so on such that the topmost box is box number 8. $R$ is box number 3. There are only two boxes between the box R and the box V . Box $W$ is placed immediately above the Box Q . There is only one box between the box $T$ and the box $U$. Box $T$ is placed above box $U$. There is only one box between the Box $R$ and Box $S$. Box $S$ is somewhere below Box $T$.
36. Which among the following box is the fifth numbered box?
A. S
B. Q
C. W
D. P
E. V
37. Which among the following box is exactly between the boxes $R$ and $S$ ?
A. U
B. $P$
C. V
D. T
E. W
38. Which among the following is the topmost box?
A. T
B. Q
C. W
D. R
E. V
39. Four of the following five are alike in a certain way and hence they form a group. Which one of the following does not belong to that group?
A. R
B. V
C. P
D. S
E. Q
40. How many boxes are there between box Q and box U?
A. None
B. One
C. Two
D. Three
E. Four

Direction (41-46): What should come in place of the question mark '?' in the following number series?
41. 66, 75, 70, 79, ?, 83
A. 74
B. 65
C. 81
D. 72
E. 75
42. 46, 50, 41, 57, 32, ?
A. 68
B. 64
C. 58
D. 55
E. 62
$43.13,20,46,109,233, ?$
A. 448
B. 336
C. 298
D. 372
E. 464
44. 3.5, ?, 21, 84, 420, 2520
A. 6
B. 7
C. 4.5
D. 9
E. 12
45. 4, 7, 12, 20, 32, ?
A. 49
B. 45
C. 48
D. 42
E. 54
46. $7,4.5,5.5,12, ?, 393$
A. 15
B. 63
C. 49
D. 83
E. 121

Direction (47-52) : In each of the following questions, two equations (I) and (II) are given. You have to solve both the equations and establish the relation between the two equations.
47. I. $2 x^{2}-19 x+45=0$
II. $2 y^{2}-15 y+28=0$
A. If $X>Y$
B. If $X<Y$
C. If $X \geq Y$
D. If $X \leq Y$
E. If $X=Y$ or No relation can be established
48. I. $2 x^{2}-13 x+21=0$
II. $y^{2}-12 y+35=0$
A. If $X>Y$
B. If $X<Y$
C. If $X \geq Y$
D. If $X \leq Y$
E. If $X=Y$ or No relation can be established
49. I. $x^{2}-9 x+20=0$
II. $2 y^{2}-11 y+15=0$
A. If $X>Y$
B. If $X<Y$
C. If $X \geq Y$
D. If $X \leq Y$
E. If $X=Y$ or No relation can be established
50. I. $2 x^{2}+13 x+18=0$
II. $2 y^{2}+5 y+2=0$
A. If $X>Y$
B. If $X<Y$
C. If $X \geq Y$
D. If $X \leq Y$
E. If $X=Y$ or No relation can be established
51. I. $x^{2}=16$
II. $y^{3}=64$
A. If $X>Y$
B. If $X<Y$
C. If $X \geq Y$
D. If $X \leq Y$
E. If $X=Y$ or No relation can be established
52. I. $2 x^{2}-11 x+12=0$
II. $Y^{2}-7 y+12=0$
A. If $X>Y$
B. If $X<Y$
C. If $X \geq Y$
D. If $X \leq Y$
E. If $X=Y$ or No relation can be established

Direction (53-56) : Read the data carefully \& answer the following questions.
In the table, data regarding total number of students and total number of students with work experience in four colleges - A, $B, C$ and $D$ is given.

| College | Total number of <br> students <br> (Male + female) | Total number of students <br> with work experience <br> (Male + female) |
| :---: | :---: | :---: |
| A | 240 | 96 |
| B | 280 | 84 |
| C | 320 | 160 |
| D | 360 | 162 |

Note: Total no. of student $=$ Number of student with work experience + Number of fresher students
53. What is difference between average number of students ( $M+F$ ) who are fresher in college $A$ and $C$ together and the average number of students ( $M+F$ ) who have work experience in college $B$ and $D$ together?
A. 33
B. 27
C. 29
D. 24
E. 30
54. Ratio between number of students $(M+F)$ who are fresher in college $A$ and total number of students $(M+F)$ who have work experience in $B \& C$ together?
A. 36:61
B. $33: 79$
C. $33: 57$
D. $34: 81$
E. 34:79
55. If number of male (fresher) in $A$ is 70 \& number of male (work experience) in same college is 48 . What total number of female (work experience + fresher) in college A?
A. 124
B. 108
C. 112
D. 106
E. 122
56. If number of female fresher in $D$ is 98 and number of female with work experience are $40 \%$ of number of male student who are fresher in same college, what is the total number of male who have work experience in $D$ ?
A. 122
B. 124
C. 102
D. 116
E. 118

Direction (57-60) : Read the data carefully and answer the following questions.
In line chart, total number of employee (male + female) and number of female employee in 5 organizations - A, B, C, D and $E$ are given.

......... Total number of female employees
57. If $10 \%$ of number of female employee from $A$ and $20 \%$ of number of male emp. from same organization are selected for a project, what is sum of number of M \& F who are not selected for project?
A. 236
B. 252
C. 244
D. 230
E. 228
58. What is ratio between number of male employees in $C$ and total number of female in C \& D together?
A. $20: 37$
B. $21: 39$
C. $23: 32$
D. $19: 27$
E. 32 : 39
59. Total male in $B$ \& $C$ together is what \% more than number of female in $A$ ?
A. $150 \%$
B. $180 \%$
C. $200 \%$
D. $240 \%$
E. $360 \%$
60. If $30 \%$ of male in A \& $40 \%$ of male in $E$ are PG. Find the total number of PG male in A \& E together.
A. 110
B. 120
C. 125
D. 130
E. 115
61. Ratio of the present age of $A$ and $B$ is $4: 5$ and the ratio of present age of $A$ and $C$ is $8: 9$. If the difference between the age of $A$ and $C$ is 5 years, then find the sum of the ages of $A, B$ and $C$ after 11 years.
A. 168 years
B. 192 years
C. 184 years
D. 144 years
E. None of these
62. In a village $A$, Number of male is twice number of female. Ratio of the male in village $A$ \& village $B$ is $1: 3$. If the number of female in village $B$ is 78 and total population in both villages is 978 . What is the number of female in village $A$ ?
A. 100
B. 250
C. 150
D. 200
E. None of these
63. The circumference of a circle is 4 times the side of a square. If the area of the circle is $154 \mathrm{~cm}^{2}$, find the area of the square ( $\mathrm{cm}^{2}$ ).
A. 169
B. 144
C. 121
D. 81
E. 225
64. A shopkeeper gave $10 \%$ discount on the MP of a article thus earning a profit of Rs. 400. Had he sold the article at $20 \%$ discount, he would have earned 330 as profit. What was the MP of article?
A. 600
B. 900
C. 700
D. 1100
E. 800
65. A tank has 3 inlets A, B, C. A \& B together fill half of tank in same time that C alone takes to fill $1 / 4$ of tank. If 3 of them together can fill tank completely in 8 hrs. What was the time(in hours) taken by C alone to fill empty tank?
A. 24
B. 36
C. 48
D. 64
E. 42
66. $A$ and $B$ started a business with Rs. 5000 and Rs. 4000 respectively. The time for which A \& B invested was in the ratio 4:3. If annual profit was Rs. 4800, then find B's share in the profit.
A. 2700
B. 7500
C. 2100
D. 1800
E. 2400
67. Asha invested a certain sum of money at $10 \%$ per annum simple rate of interest and at the end of 2 years she received Rs. 36000. If she had invested this amount at $20 \%$ per annum compound interest, how much interest would she have earned on this amount at the end of 2 years?
A. Rs. 12600
B. Rs. 13200
C. Rs. 14400
D. Rs. 13560
E. None of these
68. A vessel contain 48 litres mixture of milk and water, in which milk is 3 times than the water. 10 litres mixture is taken out and 20 litres pure water is added,
then what is difference between the quantity of water and milk in the final mixture?
A. 5 litres
B. 7 litres
C. 2 litres
D. 4 litres
E. 1 litre
69. 4 years ago, the ratio of the age of $A$ and $B$ was 5 : 4 and after $x$ years, average of the ages of $A$ and $B$ will be ( $x$ +22 ) years, then 2 years ago the age of A was
A. 24 years
B. 22 years
C. $(x-6)$ years
D. Cannot be determined
E. None of these
70. In a mixture of milk \& water, water is $25 \%$. A milkman sells 20 litres of the mixture and adds 15 litres milk as well as 15 litres water. Now the concentration of milk is $150 \%$ greater than water, then find the quantity of milk in the original mixture.
A. 144 litres
B. 150 litres
C. 165 litres
D. 162 litres
E. None of these
71. 18 Women complete a work in 16 days. they started the work together \& after $x$ days, 6 women left the work. Remaining work is completed by 12 women in 12 days. Find the value of x .
A. 6
B. 7
C. 9
D. 8
E. None of these
72. Circumference of a circle to the perimeter of a square is $11: 6$. Sum of the radius of the circle and one side of the square is 26 meter. Find the area of the square.
A. 144 meter $^{2}$
B. 164 meter $^{2}$
C. 150 meter $^{2}$
D. 124 meter $^{2}$
E. None of these
73. 6 years ago, the ratio between the age of B's mother and B's age was $7: 3$. 8 years hence, the ratio between their ages will be 7:4. Find the present age of B.
A. 20 years
B. 34 years
C. 24 years
D. 32 years
E. 48 years
74. Two trains having lengths 200 m and 255 m cross each other in 7 seconds when travelling in the opposite direction and in 91 seconds when travelling in the same direction. Find the speed of the slower train (in km/hr).
A. 90
B. 108
C. 126
D. 102
E. 96

Direction (75-80) : What approximate value will come in place of the question mark (?) in the following question? (You are not expected to calculate the exact value)
75. $(6.01)^{2}+(3.01)^{2} \times 14.01=?-10.99$
A. 173
B. 180
C. 149
D. 163
E. 153
76. $7.01 \times 3.99+4.09 \times 5.12+12.01$ = ?
A. 78
B. 77
C. 67
D. 64
E. 60
77. $6.99 / 5.99 \times 17.99+33.01=$ ?
A. 79
B. 54
C. 69
D. 74
E. 59
78. $(11.01)^{2}+4.99-(2.99)^{2}=?-$
$(8.01)^{2}$
A. 189
B. 167
C. 181
D. 163
E. 171
79. $14.01+(16.01)^{2}-220=$ ?
A. 57
B. 41
C. 50
D. 32
E. 37
80. $12.99 \times 5.99+6.99 \times(8.99)^{2}=$ ?
A. 660
B. 645
C. 610
D. 605
E. 635

## \# \# \#ANSWERS\# \# \#

## 1. Ans. E.

## Statements:

A $<\mathrm{N}<\mathrm{D}>\mathrm{R} ; \mathrm{E}>\mathrm{D}<\mathrm{W}$
I. $W>A$
$\mathrm{A}<\mathrm{N}<\mathrm{D}<\mathrm{W}$
Thus, True
II A=W
Thus, False
2. Ans. C.

## Statements:

$\mathrm{P}<\mathrm{O}<\mathrm{L}<\mathrm{E}=\mathrm{S}>\mathrm{A}$
I. $\mathrm{A}<\mathrm{O}$
$\mathrm{O}<\mathrm{L}<\mathrm{E}=\mathrm{S}>\mathrm{A}$
Thus, False
II. $S>P$
$\mathrm{P}<\mathrm{O}<\mathrm{L}<\mathrm{E}=\mathrm{S}$
Thus, True
3. Ans. B.

Statements:
$\mathrm{M}<\mathrm{O}<\mathrm{B}>\mathrm{I}=\mathrm{L}>\mathrm{E}$
I. $B<E$

B > I = L > E
Thus, False
II. L > M
$\mathrm{M}<\mathrm{O}<\mathrm{B}>\mathrm{I}=\mathrm{L}$
Thus, False
4. Ans. D.

## Statements:

A < N < D > R; E > D $<\mathrm{W}$
I. E > N
$\mathrm{N}<\mathrm{D}<\mathrm{E}$
Thus, True
II. $\mathrm{R}<\mathrm{W}$
$\mathrm{R}<\mathrm{D}<\mathrm{W}$
Thus, True
5. Ans. A.

6. Ans. A.

7. Ans. B.

8. Ans. D.

9. Ans. E.

10. Ans. D.

11. Ans. C.

12. Ans. B.

13. Ans. B.

14. Ans. B.

15. Ans. D.

16. Ans. D.

17. Ans. C.

18. Ans. C.

I M P ERATIVE-- PR, PT, PV, RT, RV, TV
IMPERATIVE-- AE
IMPERATIVE--EI
I M P ERATIVE--EM
19. Ans. D.

Given Word -- PRECIOUS
After rearrangement -- O Q F B J P V R
In alphabetic order from left to right -- $B$
FJ O P Q R V
Thus P is fourth from the right end.
20. Ans. D.

Number: 746238945
New number: 657329854
The required sum $=2+9=11$
21. Ans. A.

| Day | People |
| :--- | :--- |
| Jan 15 | L |
| Jan 30 | Q |
| Mar 15 | N |
| Mar 30 | P |
| Apr 15 | M |
| Apr 30 | T |
| June 15 | R |
| June 30 | O |
| Nov 15 | U |
| Nov 30 | S |

22. Ans. D.

| Day | People |
| :--- | :--- |
| Jan 15 | L |
| Jan 30 | Q |
| Mar 15 | N |
| Mar 30 | P |
| Apr 15 | M |
| Apr 30 | T |
| June 15 | R |
| June 30 | O |
| Nov 15 | U |
| Nov 30 | S |

23. Ans. E.

| Day | People |
| :--- | :--- |
| Jan 15 | L |
| Jan 30 | Q |
| Mar 15 | N |
| Mar 30 | P |
| Apr 15 | M |
| Apr 30 | T |
| June 15 | R |
| June 30 | O |
| Nov 15 | U |
| Nov 30 | S |

24. Ans. B.

25. Ans. A.

| Day | People |
| :--- | :--- |
| Jan 15 | L |
| Jan 30 | Q |
| Mar 15 | N |
| Mar 30 | P |
| Apr 15 | M |
| Apr 30 | T |
| June 15 | R |
| June 30 | O |
| Nov 15 | U |
| Nov 30 | S |

26. Ans. C.

Five buses: $P, Q, R, S$ and $T$.

1) $R$ has less capacity than only $Q$. (Hence, $Q$ has higher capacity)
Q > R
2) $P$ has higher capacity than $S$ and $T$.
$P>S$ and $T$.
3) $S$ carries more passengers than $T$.
(Hence, S has higher capacity than T )
S > T
Combining all, we get:
$\mathrm{Q}>\mathrm{R}>\mathrm{P}>\mathrm{S}>\mathrm{T}$

According to the question, if $R$ carries 62 Passengers then,
Clearly, Capacity of Q is higher than R and hence, the capacity of bus Q is 71 .
27. Ans. D.

Five buses: P, Q, R, S and T.

1) $R$ has less capacity than only $Q$.
(Hence, $Q$ has higher capacity)
Q > R
2) $P$ has higher capacity than $S$ and $T$.
$P>S$ and $T$
3) $S$ carries more passengers than $T$.
(Hence, $S$ has higher capacity than $T$ )
S > T
Combining all, we get:
Q > R > P > S >T
Clearly, bus $T$ has the least capacity.
28. Ans. B.

Five buses: $P, Q, R, S$ and $T$.

1) $R$ has less capacity than only $Q$.
(Hence, $Q$ has higher capacity)
Q > R
2) $P$ has higher capacity than $S$ and $T$.
$P>S$ and $T$
3) S carries more passengers than $T$.
(Hence, S has higher capacity than T)
S > T
Combining all, we get:
$\mathrm{Q}>\mathrm{R}>\mathrm{P}>\mathrm{S}>\mathrm{T}$
According to the question, If $P$ carries 25
passengers and $T$ carries 9 passengers then,
$\mathrm{Q}>\mathrm{R}>\mathrm{P}(25)>\mathrm{S}>\mathrm{T}$ (9)
Clearly, the capacity of bus $S$ is 18 , which is divisible by 3 and not divisible by 5 .
29. Ans. B.
'the capital of delhi' is coded as 'jai veru miti viki'......1)
'many festival in delhi' is coded as 'vik, nic,dic,vij' ......2)
'crowd in the capital' is coded as 'dic, veru, miti, sik'.....3)
'season for festival' is coded as 'nis, tip,vij'......5)
'delhi for country' is coded as 'vik, noo, tif'. 6)

From 1) and 2) delhi- viki
From 2) and 5) festival- vij
From 2) and 6) for- tif
From 2) and 6) country- noo
From 2) and 6) season- nis
From 2) and 3) in- dic
From 2), 3) and 5) many- nic

From 2), 3) and 5) crowd- sik
From 1), 2), 3), 4) and 5) the- either 'veru' or 'miti'
From 1), 2), 3), 4) and 5) capital- either 'veru' or 'miti'
Code of 'crowd' is 'sik'. So answer is 2).
30. Ans. D.
'the capital of delhi' is coded as 'jai veru miti viki'. .1)
'many festival in delhi' is coded as 'vik, nic,dic,vij' ......2)
'crowd in the capital' is coded as 'dic, veru, miti, sik'.....3)
'season for festival' is coded as 'nis, tip,vij'......5)
'delhi for country' is coded as 'vik, noo, tif' $\qquad$
From 1) and 2) delhi- viki
From 2) and 5) festival- vij
From 2) and 6) for- tif
From 2) and 6) country- noo
From 2) and 6) season- nis
From 2) and 3) in- dic
From 2), 3) and 5) many- nic
From 2), 3) and 5) crowd- sik
From 1), 2), 3), 4) and 5) the- either 'veru' or 'miti'
From 1), 2), 3), 4) and 5) capital- either 'veru' or 'miti'
Code of 'festival in india' is 'vij, dic, zee' india is new word in question so the code for it also new one. So answer is 4).
31. Ans. E.
'the capital of delhi' is coded as 'jai veru miti viki' .1)
'many festival in delhi' is coded as 'vik, nic,dic,vij' ......2)
'crowd in the capital' is coded as 'dic, veru, miti, sik'.....3)
'season for festival' is coded as 'nis, tip,vij'......5)
'delhi for country' is coded as 'vik, noo, tif' $\qquad$
From 1) and 2) delhi- viki
From 2) and 5) festival- vij
From 2) and 6) for- tif
From 2) and 6) country- noo
From 2) and 6) season- nis
From 2) and 3) in- dic
From 2), 3) and 5) many- nic
From 2), 3) and 5) crowd- sik
From 1), 2), 3), 4) and 5) the- either 'veru' or 'miti'

From 1), 2), 3), 4) and 5) capital- either 'veru' or 'miti'
code for 'festival in india crowd capital' is 'vij, dic, mee, sik, miti'. So answer is 5). 32. Ans. B.
'the capital of delhi' is coded as 'jai veru miti viki'. $\qquad$
'many festival in delhi' is coded as 'vik, nic,dic,vij' ......2)
'crowd in the capital' is coded as 'dic, veru, miti, sik'.....3)
'season for festival' is coded as 'nis, tip,vij'.....5)
'delhi for country' is coded as 'vik, noo, tif'. .6)
From 1) and 2) delhi- viki
From 2) and 5) festival- vij
From 2) and 6) for- tif
From 2) and 6) country- noo
From 2) and 6) season- nis
From 2) and 3) in- dic
From 2), 3) and 5) many- nic
From 2), 3) and 5) crowd- sik
From 1), 2), 3), 4) and 5) the- either 'veru' or 'miti'
From 1), 2), 3), 4) and 5) capital- either 'veru' or 'miti'
code for 'festival in india crowd capital' is 'vij, dic, mee, sik, miti'. So answer is 2).
33. Ans. A.
'the capital of delhi' is coded as 'jai veru miti viki'......1)
'many festival in delhi' is coded as 'vik, nic,dic,vij' ......2)
'crowd in the capital' is coded as 'dic, veru, miti, sik'.....3)
'season for festival' is coded as 'nis, tip,vij'......5)
'delhi for country' is coded as 'vik, noo, tif'.. ..6)
From 1) and 2) delhi- viki
From 2) and 5) festival- vij
From 2) and 6) for- tif
From 2) and 6) country- noo
From 2) and 6) season- nis
From 2) and 3) in- dic
From 2), 3) and 5) many- nic
From 2), 3) and 5) crowd- sik
From 1), 2), 3), 4) and 5) the- either 'veru' or 'miti'
From 1), 2), 3), 4) and 5) capital- either 'veru' or 'miti'

In a certain code language 'festival' is coded as ' vij ' and 'in' is coded as 'dic' in same code language 'delhi' will be coded as 'viki'. So answer is 1).
34. Ans. D.


It is given in the questions that - There are two brothers and two fathers in the family.
two brothers - A is the brother of B and E is the brother of $F$
two fathers - $B$ is the father of $D$ and $D$ is the father of $E$ \& F

F's mother Cannot be determined becaue anything is not given clealry in the question.
35. Ans. B.


It is given in the questions that - There are two brothers and two fathers in the family.
two brothers - A is the brother of B and E is the brother of $F$
two fathers - $B$ is the father of $D$ and $D$ is the father of E \& F
If $E$ is married to an outsider $M$, than ' $F$ ' is will be Sister-in-law to M
36. Ans. D.

Thus Box $P$ is the $5^{\text {th }}$ number box.

| $8^{\text {th }}$ box | W |
| :--- | :--- |
| $7^{\text {th }}$ box | Q |
| $6^{\text {th }}$ box | V |
| $5^{\text {th }}$ box | P |
| $4^{\text {th }}$ box | T |
| $3^{\text {rd }}$ box | R |
| $2^{\text {nd }}$ box | U |
| $1^{\text {st }}$ box | S |

Hence Option D is correct.
37. Ans. A.

U is placed exactly between the boxes R and S .

| $8^{\text {th }}$ box | W |
| :--- | :--- |
| $7^{\text {th }}$ box | Q |
| $6^{\text {th }}$ box | V |
| $5^{\text {th }}$ box | P |
| $4^{\text {th }}$ box | T |
| $3^{\text {rd }}$ box | R |
| $2^{\text {nd }}$ box | U |
| $1^{\text {st }}$ box | S |

Hence Option A is correct
38. Ans. C.

W is placed at the topmost position.

| $8^{\text {th }}$ box | W |
| :--- | :--- |
| $7^{\text {th }}$ box | Q |
| $6^{\text {th }}$ box | V |
| $5^{\text {th }}$ box | P |
| $4^{\text {th }}$ box | T |
| $3^{\text {rd }}$ box | $R$ |
| $2^{\text {nd }}$ box | U |
| $1^{\text {st }}$ box | S |

Hence Option C is correct
39. Ans. B.

All the others occur at odd places except V which occurs at an even place. Thus V does not belong to the group.

| $8^{\text {th }}$ box | W |
| :--- | :--- |
| $7^{\text {th }}$ box | Q |
| $6^{\text {th }}$ box | V |
| $5^{\text {th }}$ box | P |
| $4^{\text {th }}$ box | T |
| $3^{\text {rd }}$ box | R |
| $2^{\text {nd }}$ box | U |
| $1^{\text {st }}$ box | S |

Hence Option B is correct 40. Ans. E.

The solution to the above puzzle is:
4 boxes- V, P, T and R are placed between
$Q$ and $U$.

| $8^{\text {th }}$ box | W |
| :--- | :--- |
| $7^{\text {th }}$ box | Q |
| $6^{\text {th }}$ box | V |
| $5^{\text {th }}$ box | P |
| $4^{\text {th }}$ box | T |
| $3^{\text {rd }}$ box | R |
| $2^{\text {nd }}$ box | U |
| $1^{\text {st }}$ box | S |

Hence Option E is correct
41. Ans. A.
$66+9=75$
$75-5=70$
$70+9=79$
$79-5=74$
$74+9=83$
42. Ans. A.
$46+2^{2}=50$
$50-3^{2}=41$
$41+4^{2}=57$
$57-5^{2}=32$
$32+6^{2}=68$
43. Ans. A.

132046109233448
72663124215
19376191
182430
44. Ans. B.
sol.
$3.5 \times 2=7$
$7 \times 3=21$
$21 \times 4=84$
$84 \times 5=420$
$420 \times 6=2520$
45. Ans. A.
the pattern of series is:

46. Ans. C.
the pattern of the series:
$7 \times 1 / 2+1=4.5$
$4.5 \times 1+1=5.5$
$5.5 \times 2+1=12$
$12 \times 4+1=49$
$49 \times 8+1=393$
47. Ans. A.
for value of $x$ :
two factor of $2 \times 45$ will be $10 \times 9$
so value of $x=+10 / 2,+9 / 2$
for value of $y$ :
two factor of $2 \times 28$ will be $8 \times 7$
so value of $y=+8 / 2,+7 / 2$
so, $\mathrm{X}>\mathrm{Y}$
48. Ans. B.
for value of $x$ :
two factor of $2 \times 21$ will be $7 \times 6$
so value of $x=+7 / 2,+6 / 2$
for value of $y$ :
two factor of 35 will be $7 \times 5$
so value of $y=+7,+5$
so, $X<Y$
49. Ans. A.
for value of $x$ :
two factor of 20 will be $5 \times 4$
so value of $x=+5,+4$
for value of $y$ :
two factor of $2 \times 15$ will be $6 \times 5$
so value of $y=+6 / 2,+5 / 2$
so, $\mathrm{X}>\mathrm{Y}$
50. Ans. D.
for value of $x$ :
two factor of $2 \times 18$ will be $9 \times 4$
so value of $x=-9 / 2,-4 / 2$
for value of $y$ :
two factor of $2 \times 2$ will be $4 \times 1$
so value of $y=-4 / 2,-1 / 2$
so, $X \leq Y$
51. Ans. D.
for value of $x$ :
so value of $x=+4,-4$
for value of $y$ :
so value of $y=+4$
so, $\mathrm{X} \leq \mathrm{Y}$
52. Ans. E.
I. $2 x^{2}-11 x+12=0$
$2 x^{2}-(8+3) x+12=0$
$2 x^{2}-8 x-3 x+12=0$
$2 X(X-4)-3(X-4)=0$
$(X-4)(2 X-3)=0$
$X=4,1.5$
II. $Y^{2}-7 y+12=0$
$Y^{2}-4 Y-3 Y+12=0$
$Y(Y-4)-3(Y-4)=0$
$(Y-4)(Y-3)=0$
$Y=4,3$
53. Ans. C.
average number of students ( $M+F$ ) who are fresher in college $A \& C$ together $=$ $(144+160) / 2=152$
average number of students (M+F) who have work experience in college $B$ \& $D=$ $(84+162) / 2=123$
required difference= 152-123=29
54. Ans. A.

Number of students ( $M+F$ ) who are fresher in college $A=240-96=144$
total number of students ( $M+F$ ) who have work experience in $B$ \& $C$ together = $160+84=244$
Required ratio $=144: 244=36: 61$
55. Ans. E.
number of female work experience in college $A=96-48=48$
number of female (fresher) in college $\mathrm{A}=$ $144-70=74$
so, total number of female (work experience + fresher) in college $\mathrm{A}=$ $74+48=122$
56. Ans. A.
number of male fresher in $D$ is (360-162)$98=100$
so, number of female with work experience $=40 \%$ of $100=40$
so, number of male with work experience $=162-40=122$
57. Ans. B.
$10 \%$ of number of female employee from $A=10 \%$ of $120=12$
$20 \%$ of number of male employee from $A$ $=20 \%$ of $(300-120)=36$
sum of number of $M$ \& $F$ who are not selected for project $=300-(12+36)=252$ 58. Ans. A.
number of male employees in $C=340$ $140=200$
total number of female in C \& D together $=140+230=370$
required ratio $=200: 370=20: 37$
59. Ans. C.

Total male in B \& C together $=$ (320-$160)+(340-140)=360$
number of female in $A=120$
required \%=

= 200\%
60. Ans. A.
$30 \%$ of male in A are $P G=30 \%$ of (300120) $=54$
$40 \%$ of male in E are PG $=40 \%$ of (380-
240) $=56$
total number of PG male in A \& E together $=54+56=110$
61. Ans. A.

According to the the question:
A : B = $4: 5$
A : $C=8: 9$
So,
A: B:C=8:10:9
Let the present ages of $A, B$ and $C$ be $8 X$, 10X and 9X respectively.
The difference between the age of $A$ and $C$ is 5 years.
$9 X-8 X=5$
$X=5$
Then the sum of the ages of $A, B$ and $C$ after 11 years.
$(A+11)+(B+11)+(C+11)$
$(8 \times 5+11)+(10 \times 5+11)+(9 \times 5+$ 11)
$51+61+56=168$
62. Ans. A.

Let,
Vill. A: Male:Female $=2 x: 1 x$
Vill. B: Male $=3^{*}$ Female in Vill. $A=3 * 2$
$=6 x$
Acc. to question,
$2 x+1 x+6 x+78=978$
or, $x=100$
So, Number of female in village $A=1 x=$ 100
63. Ans. C.
$2 \pi r=4 a$ where, $r=$ radius of circle $\& a=$ side of square
or, $n r=2 a$
Given, area of the circle $=154 \mathrm{~cm}^{2}$,
$\pi r^{2}=154$
or, $r=7 \mathrm{~cm}$
Now, nr = 2a
or, $22 * 7 / 7=2 a$
or, $a=11 \mathrm{~cm}$
So, area of the square $=a^{2}=11^{2}=121$
cm ${ }^{2}$
64. Ans. C.

Let MP of article $=100 x$
1st case: $10 \%$ discount on the MP So, SP
$=100 x-10 x=90 x$
2nd case: $20 \%$ discount on the MP So, SP
$=100 x-20 x=80 x$
CP in both cases will be same.
So, $90 x-400=80 x-330$
or, $x=7$
So, MP of article $=100 x=700$
65. Ans. A.

Given,

$$
\frac{A+B}{C}=\frac{1 / 2}{1 / 4}=\frac{2}{1}
$$

Let, Total capacity of tank $=(2+1) * 8=$ 24 units
So, time(in hours) taken by C alone to fill empty tank $=24 / 1=24$ hrs.
66. Ans. D.

Amount*Time $=$ Profit
Profit Ratio $=\frac{A}{B}=\frac{5000 \times 4}{4000 \times 3}=\frac{5}{3}$
B's share in the profit $=$ $\frac{3}{5+3} \times 4800=1800$ Rs .
67. Ans. B.

Let money invested $=P$
SI = PRT/100
or, $36000-\mathrm{P}=\mathrm{P} * 10 * 2 / 100$
or, $\mathrm{P}=30000$ Rs.
Now, CI $=$ 30000*
$(20+20+20 * 20 / 100) \%=$ Rs. 13200
68. Ans. E.

Total mixture $=48$ lit.
M:W = 3:1
So, Milk $=36$ lit.
Water = 12 lit.
10 litre mixture is taken out \& 20 litre pure water is added

Now, Milk $=36-7.5=28.5$
\& Water $=12-2.5+20=29.5$
Required difference $=29.5-28.5=1 \mathrm{lit}$. 69. Ans. B.

Let 4 years ago, the ages of $A$ and $B$ be 5 a years and 4 a years, then
Present age of $A=(5 a+4)$ years
Present age of $B=(4 a+4)$ years
After x years, their average age will be ( $x$
$+22)$ years, then
$[(5 a+4)+x]+[(4 a+4)+x]=(x+$ 22) $\times 2$
$\Rightarrow 9 \mathrm{a}+8=44$
$\Rightarrow 9 \mathrm{a}=44-8=36$
$\Rightarrow a=36 / 9=4$
Hence, 2 years ago the age of $A$ was $=$ $(5 a+4)-2=5 a+2=5 \times 4+2=22$ years
70. Ans. B.

Let Total mixture $=4 x$
water is $25 \%$. So,Milk: Water $=3 x: x$
He sells 20 litres of the mixture. So, Milk
$=15$ lit. \& water $=5$ lit.

$$
\frac{3 x-15+15}{x-5+15}=\frac{5}{2}
$$

Now, or, $x=50$
So, Quantity of milk in the original mixture $=3 x=3 * 50=150$ lit.
71. Ans. D.
$18 \times 16=18 \times x+12 \times 12$
or, $x=8$ days
72. Ans. A.
$\frac{2 \Pi r}{4 a}=\frac{11}{6}$
or, $\frac{r}{a}=\frac{7}{6}$
where, $r=$ radius of circle \&
a = side of square
Given, $\mathrm{r}+\mathrm{a}=26$
So, $a=6 / 13 * 26=12$
Hence, area of square $=12 * 12=144$
73. Ans. C.

Let the ages of $B$ 's mother and $B$ be $X$.
According to the question:

$$
\begin{aligned}
& \frac{7 X+14}{3 X+14}=\frac{7}{4} \\
& 28 X+56=21 X+98 \\
& X=6
\end{aligned}
$$

The present age of $B$ :
$3 X+6=18+6=24$ years
74. Ans. B.

In the opposite direction,
Sum of speeds (Faster+Slower)
$=(200+255) / 7=65 \mathrm{~m} / \mathrm{s}-$-(i)
Difference of speeds(Faster-Slower) = $(200+255) 91=5 \mathrm{~m} / \mathrm{s}-$-(ii)
From (i)\&(ii),
speed of the slower train $=30 \mathrm{~m} / \mathrm{s}=108$ km/hr
75. Ans. A.
$(6)^{2}+(3)^{2} \times 14=?-11$
$36+9 \times 14=?-11$
$36+126=?-11$
? $=162+11$
? = 173
76. Ans. E.
? $\approx 7 \times 4+4 \times 5+12$
$?=28+20+12$

```
? = 60
77. Ans. B.
? \(\approx 7 / 6 \times 18+33\)
\(?=21+33\)
? = 54
78. Ans. C.
\((11)^{2}+5-(3)^{2}=?-(8)^{2}\)
\(121+5-9=?-64\)
? \(=117+64\)
? = 181
79. Ans. C.
? \(\approx 14+(16)^{2}-220\)
? \(=14+256-220\)
\(?=50\)
80. Ans. B.
? \(\approx 13 \times 6+7 \times(9)^{2}\)
\(?=78+567\)
\(?=645\)
```


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