IBPS RRB PO Prelims 7th August 2021(Memory-based Questions with Solutions)

DOWNLOAD PDF

IBPS RRB PO Prelims Memory Based Questions

Quant

1. **Direction:** In the following question two equations are given in variables X and Y. You have to solve these equations and determine the relation between X and Y.

I. $3X^2 + 7X - 6 = 0$

II. $4Y^2 - 13Y - 12 = 0$

A. Y > X

B. X > Y

C. X ≤ Y

D. X ≥ Y

E. X = Y or no relation can be established

Ans. E

Sol.

I. $3X^2 + 7X - 6 = 0$

⇒ $3X^2 + 9X - 2X - 6 = 0$

⇒ $3X(X + 3) - 2(X + 3) = 0$

⇒ $(3X - 2)(X + 3) = 0$

⇒ X = 2/3, −3

II. $4Y^2 - 13Y - 12 = 0$

⇒ $4Y^2 - 16Y + 3Y - 12 = 0$

⇒ $4Y(Y - 4) + 3(Y - 4) = 0$

⇒ $(4Y + 3)(Y - 4) = 0$

⇒ Y = 4, −3/4

Hence, no relation can be established.

2. I. $3X^2 + 2X - 21 = 0$

II. $3Y^2 - 19Y + 28 = 0$

A. Y > X

B. X > Y

C. X ≤ Y

D. X ≥ Y

E. X = Y or no relation can be established

Ans. C

Sol.

I. $3X^2 + 2X - 21 = 0$

⇒ $3X^2 + 9X - 7X - 21 = 0$

⇒ $3X(X + 3) - 7(X + 3) = 0$

⇒ $(3X - 7)(X + 3) = 0$

⇒ X = 7/3, −3

II. $3Y^2 - 19Y + 28 = 0$

⇒ $3Y^2 - 12Y - 7Y + 28 = 0$

⇒ $3Y(Y - 4) - 7(Y - 4) = 0$

⇒ $(3Y - 7)(Y - 4) = 0$

⇒ Y = 4, 7/3

Hence, X ≤ Y.

3. I. $X^2 + 4X + 4 = 0$

II. $Y^2 + 3Y + 2 = 0$

A. Y > X

B. X > Y

C. X ≤ Y

D. X ≥ Y

E. X = Y or no relation can be established

Ans. C

Sol.

I. $X^2 + 4X + 4 = 0$

⇒ $X^2 + 2X + 2X + 4 = 0$

⇒ $X(X + 2) + 2(X + 2) = 0$

⇒ $(X + 2)(X + 2) = 0$

⇒ X = −2

II. $Y^2 + 3Y + 2 = 0$

⇒ $Y^2 + 2Y + Y + 2 = 0$

⇒ $Y(Y + 2) + 1(Y + 2) = 0$

⇒ $(Y + 2)(Y + 1) = 0$

⇒ Y = −2, −1

Hence, X ≤ Y.

4. I. $X^2 + 3X - 4 = 0$

II. $3Y^2 + 8Y + 5 = 0$

A. Y > X

B. X > Y

C. X ≤ Y

D. X ≥ Y

E. X = Y or no relation can be established

Ans. E

Sol.

I. $X^2 + 3X - 4 = 0$

⇒ $X^2 + 4X - X - 4 = 0$
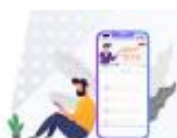
⇒ X(X + 4) − 1(X + 4) = 0
⇒ (X − 1)(X + 4) = 0
⇒ X = 1, −4
II. $3Y^2 + 8Y + 5 = 0$
⇒ $3Y^2 + 3Y + 5Y + 5 = 0$
⇒ 3Y(Y + 1) + 5(Y + 1) = 0
⇒ (Y + 1)(3Y + 5) = 0
⇒ Y = −1, −5/3
Hence, no relation can be established.

5.
Direction: In the following number series, only one number is wrong. Find out the wrong number.
12, 18, 36, 90, 270, 940, 3780 A. 270
B. 940
C. 3780
D. 36
E. 12

Ans. B
Sol.
The pattern of the series is:
12 × 1.5 = 18
18 × 2 = 36
36 × 2.5 = 90
90 × 3 = 270
270 × 3.5 = 945
945 × 4 = 3780
Hence, the wrong number is 940.

6.8, 10, 23, 73, 297, 1490, 8953
A. 10
B. 23
C. 73
D. 1490
E. 297

Ans. D
Sol.
The pattern of the series is:
8 × 1 + 2 = 10
10 × 2 + 3 = 23
23 × 3 + 4 = 73
73 × 4 + 5 = 297
297 × 5 + 6 = 1491
1491 × 6 + 7 = 8953

Hence, the wrong number is 1490.

7.1001, 1000, 992, 965, 901, 778, 560
A. 778
B. 560
C. 1001
D. 992
E. 965

Ans. A
Sol.
The pattern of the series is:
$1001 − 1^3 = 1000$
$1000 − 2^3 = 992$
$992 − 3^3 = 965$
$965 − 4^3 = 901$
$901 − 5^3 = 776$
$776 − 6^3 = 560$
Hence, the wrong number is 778.

8.130, 133, 128, 136, 120, 152, 88
A. 152
B. 88
C. 133
D. 128
E. 120

Ans. C
Sol.
The pattern of the series is:
130 + 2 = 132
132 − 4 = 128
128 + 8 = 136
136 − 16 = 120
120 + 32 = 152
152 − 64 = 88
Hence, the wrong number is 133.

9.The ratio of the present age of father and his son is 4 : 1. 5 years hence, father's age will be thrice of his son's age at that time. What is the difference between their present ages?
A. 25 years
B. 30 years
C. 32 years

D. 21 years
E. None of these

Ans. B
Sol.
Let the present age of father and son be 4x and x respectively.
According to question,
$4x + 5 = 3(x + 5)$
$\Rightarrow 4x + 5 = 3x + 15$
$\Rightarrow 4x - 3x = 15 - 5$
$\Rightarrow x = 10$
Difference between present ages of father and son = $4x - x = 3x = 3 \times 10 = 30$ years

10. A and B together can do a work in 60 days. B and C together can do the same work in 120 days. If B alone can do this work in 180 days then in how many days A and C together will finish this work?
A. 84
B. 72
C. 64
D. 74
E. 80

Ans. B
Sol.
Let the total work be 360 units.
Work done by A and B together in 1 day = $\frac{360}{60}$ = 6 units
Work done by B and C together in 1 day = $\frac{360}{120}$ = 3 units
Work done by B alone in 1 day = $\frac{360}{180}$ = 2 units
Work done by C alone in 1 day = $3 - 2 = 1$ unit
Work done by A alone in 1 day = $6 - 2 = 4$ units
Number of days required by A and C together to finish the work = $\frac{360}{4 + 1}$ = 72

Reasoning

Direction: Study the following information carefully and answer the questions below.

Ten boxes are arranged in a stack one above another from bottom to top. but not necessarily in the same order.W is placed at the top of the stack and three places away from B. Three boxes are placed between B and U. X, which is immediately above P, is placed below B. One box is placed between Q and Y, Q being above Y. Neither B is adjacent to X nor U is adjacent to P. T is placed immediately below R. S is not adjacent to Y.

	Boxes
10	W
9	S
8	Q
7	B
6	Y
5	R
4	T
3	U
2	X
1	P

1. In which position is S placed in the stack?A. 9th
B. 5th
C. 3rd
D. 7th
E. 2nd

Ans. A
Sol.

2.How many boxes are placed between Q and P?
A. 3

B. 4
C. 5
D. 6
E. None of the above

Ans. D
Sol.

	Boxes
10	W
9	S
8	Q
7	B
6	Y
5	R
4	T
3	U
2	X
1	P

	Boxes
10	W
9	S
8	Q
7	B
6	Y
5	R
4	T
3	U
2	X
1	P

3.Which of the following boxes is placed at the bottom?
A. Y
B. P
C. Q
D. U
E. None of the above

Ans. B
Sol.

4.Y is _____ places away from _____.
A. three, U
B. two, X
C. one, P
D. more than three, U
E. None of the above

Ans. A
Sol.

	Boxes
10	W
9	S
8	Q
7	B
6	Y
5	R
4	T
3	U
2	X
1	P

5.How many boxes are placed above B?
A. Two
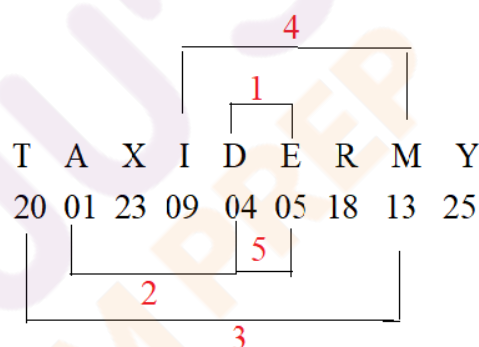B. More than three
C. Three
D. One
E. None of the above

Ans. C
Sol.

	Boxes
10	W
9	S
8	Q
7	B
6	Y
5	R
4	T
3	U
2	X
1	P

6. How many such pairs of letters are there between in the word "TAXIDERMY" which has as many letters between them in the word as they have between them in the English alphabet?
A. 1
B. 2
C. 3
D. More than 4
E. 4

Ans. D
Sol.

7.If a meaningful word can be formed using 2nd, 4th, 7th and 9th letters of "THYROXINE", what is the second letter of the newly formed word? If more than one word can be formed mark your answer as P. If no such word can be formed mark your answer as Z.
A. I
B. R
C. H
D. P
E. Z

Ans. D
Sol. The 2nd, 4th, 7th and 9th letters of "THYROXINE" are H, R, I and E.

The meaningful words are HIRE, HEIR

Hence, more than one word is formed. So, answer is P

8. **Direction:** In the following questions assuming the given statement/s to be true, find which of the conclusions/s among the given conclusions is/are definitely true and then give your answer accordingly. |||End|||

Statements:
T ≤ E < N, B = I ≥ R ≥ T ≤ H

Conclusions:
I. B ≤ N
II. H > E
A. Only I
B. Only II
C. Both I and II
D. Neither I nor II
E. None of the above

Ans. D
Sol.
B = I ≥ R ≥ T ≤ E < N
Hence, conclusion I is not true.
T ≤ H and T ≤ E which implies that T ≤ E, H
Relationship between E and H cannot be determined.

9.**Statements**:
D ≤ A ≤ Y, E ≤ X ≤ T, A > X
Conclusions:
I. A>T
II. X<Y
A. Only I
B. Only II
C. Both I and II
D. Neither I nor II
E. None of the above

Ans. B
Sol. D ≤ A > X ≤ T
Hence, A > T is false
X < A ≤ Y
X < Y is true.

10.**Statements**:
A ≤ B ≤ F, F ≤ P ≤ Q, S > Q
Conclusions:
I. A < Q
II. A = Q
A. Only I
B. Only II
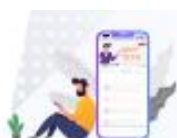C. Both I and II
D. Neither I nor II
E. Either I or II

Ans. E
Sol. A ≤ B ≤ F ≤ P ≤ Q < S
A ≤ Q
Therefore, A < Q and A = Q
Either I or II follows.

SBI & IBPS 2022
A Sure Shot Success (Batch 7)

This Course Includes:

› 200+ Live Classes for Complete Conceptual Clarity

› 40+ Full-Length Mock Tests for all bank & insurance exams

› 200+ Interactive Quizzes

› Coverage of Reasoning, Quantitative Aptitude, General
  Awareness Knowledge and English