

# Inequalities questions for IBPS PO pre, IBPS SO pre, IBPS clerk, RRB Scale I Pre, SBI PO Pre and **SBI Clerk**

# **INEQUALITIES QUIZ 11**

Directions: In this question, relationship between different elements is shown in the statements. You have to take the given statements to be true even if they seem to be at variance with commonly known facts. The statement is followed by some conclusions. Study the conclusions based on the given statement and select the appropriate answer.

#### (1). Statements: C <` L ≤ M = E ≤ X < I, J = X < H ≤ S ≤ V > N, A ≤ V < T = Z = W > U Conclusions: I. $L \le H$ , II. S < M, III. J < Z

- A. Only C1 and C2 follow
- B. Only C3 follows
- C. Only C2 and C3 follow
- D. All the conclusions follow E. None of the conclusions follows E. None of the conclusions follows
- (2). Statements:  $C < L \le K = E \le Q < I$ ,  $J = Q < H \le S \le V > N$ ,  $A \le V < O = Y = W > U$ Conclusions: I. L < O, II. S > K III. O > C
  - A. Only C1 and C3 follow
  - B. Only C2 follows
  - C. Either C3 or C2 follows
  - D. All the conclusions follow
  - E. None of the conclusions follow
- (3). Statements: T < H ≤ L < S ≤ K < A, M = F ≠ S = G ≥ I > Q, U ≤ B < N = C = I</p> Conclusions: I. N < A, II. T < B, III. S  $\ge$  N
  - A. Neither C2 nor C3 follows
  - B. Only C1 and C3 follow
  - C. Both C1 and C2 follow
  - D. All the conclusions follow
  - E. None of the conclusions follow
- (4). Statements: A = B ≥ C > D ≤ E, K < L ≥ N = E, F > G ≥ B > I = J Conclusions: I. D < L, II. D = L

A. Neither C1 nor C2 follows

B. Only C1 follows

C. Both C1 and C2 follow

D. Only C2 follows

E. Either C1 or C2 follows

#### (5). Statements: G < T ≤ K = E ≤ Q < I, J = Q < H ≤ S ≤ V > N, A ≤ V < O = Y = W > U Conclusions: I. T < O II. S > K

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A. Neither C1 nor C2 followsB. Only C1 followsC. Both C1 and C2 followD. Only C2 followsE. Either C1 or C2 follows

#### (6). Statements: W < U = V ≤ X, V > Y ≥ Z, Y < P ≤ Q = R Conclusions: I. W > Z, II. Z < R</p>

A. Only conclusion I follows

B. Only conclusion II follows

C. Either conclusion I or conclusion II follows.

D. Both the conclusion follow Question Bank

E. None of the conclusions follows

#### (7). Statements: $U > M \ge A = N < S$ , $X = N \ge Q = Y > R$ Conclusions: M > Y, M = Y

- A. Both conclusions I and II follow
- B. Either conclusion I or II follows
- C. Only conclusion I follows

D. Only conclusion II follows

E. Neither conclusion I nor II follows

# (8). Statements: $M \ge P \ge Q > R = S$ , $B < T = H \ge J > M$ Conclusions: $J \ge Q$ , P > T

- A. Both conclusions I and II follow
- B. Either conclusion I or II follows

C. Only conclusion I follows

D. Only conclusion II follows

E. Neither conclusion I nor II follows

# (9). Statement: $A = B = C \ge D \ge E \ge F = G = H$ Conclusions: I. C > F, II. B = G, III. $H \le D$

A. Only C1 followsB. Either C2 or C3 followsC. Only C2 followsD. Either C1 or C2 and C3 followsE. None follows

#### (10). Statement: $V \ge X \ge O \ge P = S = Q \ge L > N$ Conclusions: I. Q $\Rightarrow$ V, II. N < P, III. P $\le$ V

A. None followsB. Only C2 followsC. Either C2 or C3 followsD. Only C1 followsE. All C1, C2 and C3 follow

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#### **Correct answers:**

1	2	3	4	5	6	7	8	9	10
В	D	В	Е	С	В	В	Е	D	Ε

# **Explanations:**

1.

Statements:  $C < L \le M = E \le X < I$ ,  $J = X < H \le S \le V > N$ ,  $A \le V < T = Z = W > U$ 

Conclusions: I.  $L \le H$ , II. S < M, III. J < Z

Combining both the equations to find the relationship between L and H, we get

 $L \le M = E \le X < H$ 

Clearly, the common sign of inequalities between L and H is of '<' and the given conclusion is  $L \le H$ . C1, hence, does not follow.

Similarly, for S and M, we get

 $S \ge H > X \ge E = M$ 

Clearly, the common sign between S and M is of '>' and the given conclusion is S < M. C2, hence, does not follow.

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Similarly, for J and Z, we get

 $J = X < H \le S \le V < T = Z$ 

Clearly, the common sign between J and Z is of '<' and the given conclusion is also J < Z. C3, hence, follows.

Option B is hence the correct answer.

# 2.

Statements:  $C < L \le K = E \le Q < I$ ,  $J = Q < H \le S \le V > N$ ,  $A \le V < O = Y = W > U$ 

Conclusions: I. L < O, II. S > K, III. O > C

Combining both the equations to find the relationship between L and O, we get

 $L \leq K = E \leq Q < H \leq S \leq V < O$ 

Clearly, the common sign of inequalities between L and O is of '<' and the given conclusion is L < O. C1, hence, follows.

Similarly, for S and K, we get

 $S \ge H > Q \ge E = K$ 

Clearly, the common sign between S and K is of '>' and the given conclusion is S > K. C2, hence, follows as well.

Similarly, for O and C, we get

 $C < L \leq K = E \leq Q < H \leq S \leq V < O$ 

Clearly, the common sign between C and O is of '<' , thus C < O or O > C and the given conclusion is O > C. Hence C3, also follows.

Option D is hence the correct answer.

# 3.

Statements:  $T < H \le L < S \le K < A$ ,  $M = F \ne S = G \ge I > Q$ ,  $U \le B < N = C = I$ 

Conclusions: I. N < A, II. T < B, III. S  $\ge$  N

Combining the equations to find the relationship between N and A, we get

 $\mathsf{N} = \mathsf{C} = \mathsf{I} \le \mathsf{G} = \mathsf{S} \le \mathsf{K} < \mathsf{A}$ 

Clearly, the common sign of inequalities between N and A is of '<'. Conclusion N < A is hence stays true. C1, hence, follows.

Similarly, combining equations to find the relationship between T and B, we get

 $\mathsf{T} < \mathsf{H} \le \mathsf{L} < \mathsf{S} = \mathsf{G} \ge \mathsf{I} = \mathsf{C} = \mathsf{N} > \mathsf{B}$ 

Clearly, the signs are getting reversed and hence we can't define a relationship between T and B. C2, hence, doesn't follow.

Similarly, combining equations to find the relationship between S and N, we get

 $S = G \ge I = C = N$ 

Here the common sign between S and N is ' $\geq$ ' and the given conclusion is S  $\geq$  N. Evidently , C3 follows.

Option B is hence the correct answer.

# 4.

Statements:  $A = B \ge C > D \le E$ ,  $K < L \ge N = E$ ,  $F > G \ge B > I = J$ 

Conclusions: I. D < L II. D = L

Combining the equations to find the relationship between D and L, we get

 $D \le E = N \le L$ 

Clearly, the common sign of inequalities between D and L is of ' $\leq$ '. Conclusion D < L is hence stays false individually as the relationship is D  $\leq$  L.

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Clearly, the common sign of inequalities between D and L is of ' $\leq$ '. Conclusion D = L is hence stays false individually as the relationship is D  $\leq$  L.

But if we combine both the individual conclusions, we'll get that either D < L or D = L.

Hence Either C1 or C2 follows.

Option E is hence the correct answer.

# 5.

Statements:  $G < T \le K = E \le Q < I$ ,  $J = Q < H \le S \le V > N$ ,  $A \le V < O = Y = W > U$ 

Conclusions: I. T < O II. S > K

Combining both the equations to find the relationship between T and O, we get

 $T \le K = E \le Q < H \le S \le V < O$ 

Clearly, the common sign of inequalities between T and O is of '<' and the given conclusion is T < O. C1, hence, follows.

Similarly, for S and K, we get

 $S \ge H > Q \ge E = K$ 

Clearly, the common sign between S and K is of '>' and the given conclusion is S > K. C2, hence, follows as well.

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Option C is hence the correct answer. Smartkeeda

6.

Only conclusion II follows

Option B, is hence the correct answer.

Common explanation:

There is a priority order of the symbols according to which the priority of the symbol is decided to reach the conclusion. Whenever there are two or more type of symbols are there between two objects whose relation is to be determine we have to use this order.

If the direction of sign is opposite between that two objects, no relation can be stated perfectly and we have to say that it does not follow.

**Priority Order:** 1. > and <  $2. \geq and \leq$ 3. =

For conclusion I: W > Z

Combining statement I and II:

 $W < U = V > Y \ge Z$ 

As, the sign between W and Z are in opposite direction so, the chain breaks, hence we cannot conclude the relation between W and Z.

Hence, the conclusion does not follow.

For conclusion II: Z < R

Combining statement II and III:

 $Z \le Y < P \le Q = R$ 

As, "<" sign is the highest prior sign here, so, Z < R is the actual relation.

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Henc<mark>e, the concl</mark>usion follows.

Only conclusion II follows

Hence, option B is correct.

# 7.

Statements:  $U > M \ge A = N < S$ ,  $X = N \ge Q = Y > R$ 

Conclusions: M > Y, M = Y

For Conclusion I: M > Y

From statements I and II, we get:

 $\mathsf{M} \ge \mathsf{A} = \mathsf{N} \ge \mathsf{Q} = \mathsf{Y}$ 

Here, the common sign between M and Y is ' $\geq$ '. Hence M > Y is not true individually.

For Conclusion II: M = Y

From statements I and II, we get:

 $M \ge A = N = X \ge Q = Y$ 

Here, the common sign between M and Y is ' $\geq$ '. Hence M = Y is not true individually.

But if we combine both the conclusions, we will get to know that Either M > Y or M = Y.

Thus, either conclusion I or conclusion II follows.

Hence option B is correct.

8.

Statements:  $M \ge P \ge Q > R = S$ ,  $B < T = H \ge J > M$ 

Conclusions:  $J \ge Q, P > T$ 

For Conclusion I:  $J \ge Q$ 

From statements I and II, we get:

 $J > M \ge P \ge Q$ 

Here, the common sign between J and Q is '>' . Thus  $J \ge Q$  is false. Hence concluison I does not follow.

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For Conclusion II: P > T

From statements I and II, we get:

 $\mathsf{T} = \mathsf{H} \ge \mathsf{J} > \mathsf{M} \ge \mathsf{P}$ 

Here, the common sign between T and P is '>'. Thus T > P or P < T. Hence conclusion II also does not follow.

Thus Neither conclusion I nor conclusion II follows.

Hence option E is correct.

# 9.

Given Statement:  $A = B = C \ge D \ge E \ge F = G = H$ 

For C1, we can see that between C and F the common sign is of  $\geq$  which means C1 individually doesn't follow. But if we look at C2 which is B = G (or C = Fbecause we have B = C and G = F), we can say that either C1 or C2 follows.

Now, between H and D the common sign is of ' $\leq$ ' (while moving from H to D), which is given as C3.

Hence C3 completely follows.

Option D is hence the correct answer. **Smartkeeda** 



Given Statement:  $V \ge X \ge O \ge P = S = Q \ge L > N$ 

Conclusions: I. Q  $\ge$  V, II. N < P, III. P  $\le$  V

For C1, we can see that between Q and V, (while moving from Q to V) the common sign of inequality is of  $\leq$  which means Q is either less than or equal to V, while C1 says Q is not greater than V, which is exactly the same thing. C1 hence follows.

In the second conclusion, between N and P (while moving from N to P), the common sign is of '<', therefore the conclusion 2, which is N < P, follows as well.

Similarly, in the third conclusion, between P and V (while moving from P to V), the common sign is of ' $\leq$ ', therefore the conclusion 3, which is P  $\leq$  V, follows too.

Option E is hence the correct answer.

