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“Score High with **Score-Up** PDF Series”

We **Dream Big Institution** Team have started a New Series “**Score-Up PDF**”. This will be like a one-stop solution for High Standard Practice Questions on all Topics. Here we have Given the **Reasoning Ability** “**Score-Up PDF**” –**Equality-Inequality**, Candidates can download it now. Kindly share this to all your friends.

What is Reasoning Inequality?

When a group of elements are given with a certain coded relationship denoted by $<$, $>$, $=$ or \geq , such type of questions fall under the category of reasoning Inequality.

To make the concept even more understandable, refer to the table given below:

S.No	Symbol	Meaning
1.	$A > B$	A is Greater than B.
2.	$A < B$	A is Smaller than B
3.	$A = B$	A is Equals to B.
4.	$A \neq B$	A is either greater than or smaller than B
5.	$A \geq B$	A is Greater than or Equals to B
6.	$A \leq B$	A is Smaller than or Equals to B

Once a candidate understands the meaning of each of the symbols mentioned above, answering questions based on reasoning inequality shall become easier.

Another critical aspect that a candidate must know concerning the Inequality in reasoning is the order or the rank of these symbols.

1. If in a question, $P > Q \geq R$ is given, the greater-than sign ($>$) will be of the highest order and $P > R$ and not $P \geq R$
2. If in a question, $P \geq R = Q$ is given, in that case, $P > Q$ or $P = Q$
3. If in a question, $P < Q < R$ is given, then $P < R$
4. If in a question, $P < Q > R$ is given, the **no relation** can be found between the terms

Similar conclusions can be drawn for other questions based on inequalities

Types of Questions in Inequality

The questions based on inequality have to be solved with the help of cracking the coding relationship between the given elements but to make the questions more complex, a new pattern for reasoning inequality questions has come up.



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Given below are the two patterns in which the Inequality questions in reasoning are asked:

- **Direct Questions** – In direct questions, the candidates are given the elements and the relationship between them is marked with the help of the signs, $<$, $>$, $=$, etc. **For example $A>B=C\leq D$**
- **Coded Questions** – The new format of inequality questions which is now being asked in all major exams is that they denote each sign with a symbol. **For example, they may give “ $A@B$, where @ means that A is neither greater than nor equal to B”**. In this case, the “ $=$ ” sign has been denoted with the “@” sign. This pattern is now being followed for all major Government exams to make the questions complex and confusing.

Tips and Tricks to Solve Questions on Inequality

Every aspirant preparing for the competitive exams knows the value of time management to qualify any of these exams. So, any small tip or trick which can help you save some time in the final examination must be used to answer the questions.

Given below are such tips to help you answer the questions on Inequality and ace the reasoning ability section:

1. To answer any inequality question, the most important thing is to be aware of the signs and their representation. Only then can you answer the questions without making errors
2. If the statements given comprise a single element more than once, try to combine the statement so that no element is repeated. For example, “ $A>B>C$, $F<C$, $A=E$ ”, all are a part of a single statement, so you can combine them to form, “ $E=A>B>C>F$ ”
3. At no point should you change the sign between two given elements. However, you can write $H>E$ or $E<H$ as both denote the same
4. For coded inequalities, make sure that you make a table or any other diagram which mentions what sign each code represents. This will save you some time as you shall not have to read the question again and again and spend time on it.



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Topic Name: Equality-Inequality Score-Up PDF Bank |SSC| Railway exam

EXERCISE (Basic to High Level Questions)

1). In which of the given expression does the expression $F < N$ and $R > M$ definitely hold true?

- a) $M \leq N < L; R > N; P < F \leq L$
- b) $M \leq N > L; R < N; P < F \geq L$
- c) $M \leq N > L; R > N; P < F \leq L$
- d) $M \leq N > L; R < N; P < F \geq L$
- e) $M \geq N > L; R > N; P < F \leq L$

2). In which of the given expression does the expression $N > Q$ and $L > P$ definitely hold True?

- a) $L > M \geq N < O = P \leq Q < R$
- b) $L > M \geq N > O = P \leq Q < R$
- c) $L > M \geq N > O = P \geq Q < R$
- d) $L > M \geq N \leq O = P \leq Q < R$
- e) $L \geq M \geq N \geq O = P \geq Q < R$

3). What is in the place of question mark (?) in the given expression does the expression $S > Y$ is definitely true and $X \geq V$ is definitely false?

$$S \geq T > X = U ? Y \geq V > Z$$

- a) \geq
- b) $>$ or $=$
- c) $>$
- d) $=$



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e) <

4). What is in the place of question mark (?) in the given expression does the expression $K < H$ and $V > K$ is definitely true?

$V = O \geq L ? K; O \leq H$

a) >

b) =

c) < or \leq

d) \geq

e) None of these

5). If the expression $D < A > C = F \geq G$ is definitely true, which of the following would be definitely true?

a) $G < C$

b) $D = C$

c) $G < A$

d) $F \leq A$

e) $D \leq F$

6). In which of the following expressions the expression ' $P \leq M$ ' would hold definitely true?

a) $M \geq R = N > S \geq P = Q$

b) $Q \geq M > N = W \geq P < S$

c) $Q > M \geq N = W \geq P < S$

d) $W < P = N \leq Q < M > R$

e) $N > Q = P < S \leq R \leq M$

7). In which of the following expressions the expression ' $R < S \leq M$ ' would hold definitely false?



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a) $V > R \leq K < S = W \leq M$

b) $V < M \geq T \geq S = P > R$

c) $K > M = J \geq S > N = R$

d) $T = R \leq K < S = P < M$

e) $M \geq P = S \geq T > R = V$

8). Which of the following symbols should replace the question mark in the given expression in order to make $K \leq M$ definitely true? $N = K = L ? P ? M$

a) $<, <$

b) $\leq, =$

c) $\leq, <$

d) $<, \leq$

e) None of these

9). Which of the following expressions is false, if the given expression is true? $V = W > X \leq Y = Z$

a) $V > X$

b) $Y \geq X$

c) $Y \geq W$

d) $Z \geq X$

e) None of these

10). What will come in place of question mark (?) to make the expression $E > M$ true but $A < O$ not true? $A ? M = N ? O \leq E$

a) $=, \leq$

b) \geq, \leq

c) $>, <$

d) $\leq, <$



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e) None of these

11). In which of the following expressions $Q > P$ is not true?

a) $J \leq Q > M = H \geq P$

b) $P > M \leq H = Q \geq N$

c) $M = P < H = N \leq Q$

d) Only 1) and 3)

e) None of these

12). In which of the following expressions $R < N$ is false?

a) $R \leq P = S < N > J = L$

b) $S < R \leq P = J < L \leq N$

c) $N > P = J \geq L \geq R < S$

d) $L > R > P > J = S \geq N$

e) None of these

13). What will come in place of question mark (?) to make the expression $L \geq M$ and $P \geq Q$ true? $L \geq Q ? M ? O$

$\leq P$

a) $>, \leq$

b) \geq, \leq

c) $=, =$

d) $\leq, =$

e) None of these

14). Which of the following expressions will be true if the given expression $T > U \geq V < W < X$ is definitely true?

a) $T \geq V$



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- b) $X > V$
- c) $W \geq V$
- d) $T > W$
- e) None of these

15). If the expression 'F < K ≤ I > A', 'I ≤ Z' and F > G are true, which of the following conclusions will be definitely false?

- a) $G < Z$
- b) $Z > F$
- c) $G < I$
- d) $K \leq Z$
- e) All are true

16). Which of the following symbols should replace the question mark in the given expression to make the expression M < J definitely true? J _ O _ P _ M

- a) $\geq, =, \geq$
- b) $>, \geq, <$
- c) $>, =, \geq$
- d) $\leq, <, =$
- e) All are true

17). In which of the given expression does the expression F < N and R > M definitely hold true?

- a) $M \leq N < L; R > N; P < F \leq L$
- b) $M \leq N > L; R < N; P < F \geq L$
- c) $M \leq N > L; R > N; P < F \leq L$
- d) $M \leq N > L; R < N; P < F \geq L$
- e) $M \geq N > L; R > N; P < F \leq L$



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18). In which of the given expression does the expression $N > Q$ and $L > P$ definitely hold True?

- a) $L > M \geq N < O = P \leq Q < R$
- b) $L > M \geq N > O = P \leq Q < R$
- c) $L > M \geq N > O = P \geq Q < R$
- d) $L > M \geq N \leq O = P \leq Q < R$
- e) $L \geq M \geq N \geq O = P \geq Q < R$

19). What is in the place of question mark (?) in the given expression does the expression $S > Y$ is definitely true and $X \geq V$ is definitely false?

$S \geq T > X = U ? Y \geq V > Z$

- a) \geq
- b) $>$ or $=$
- c) $>$
- d) $=$
- e) $<$

20). What is in the place of question mark (?) in the given expression does the expression $K < H$ and $V > K$ is definitely true?

$V = O \geq L ? K; O \leq H$

- a) $>$
- b) $=$
- c) $<$ or \leq
- d) \geq
- e) None of these



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Directions (Q. 21-25) In the following questions, the symbols α , β , $\$$, $\#$, δ are used with the following meanings.

$A \alpha B$ means 'A is not smaller than B'.

$A \beta B$ means 'A is neither greater than nor smaller than B'.

$A \$ B$ means 'A is not greater than B'.

$A \# B$ means 'A is neither smaller than nor equal to B'.

$A \delta B$ means 'A is neither greater than nor equal to B'.

Now in each of the following questions, assuming the given statements to be true, find which of the two conclusions I and II given below them is/are definitely true. Give answer

1) *if only conclusion I is true.*

2) *if only conclusion II is true.*

3) *if either conclusion I or II is true.*

4) *if neither conclusion I nor II is true.*

5) *if both conclusions I and II are true.*

21). Statements: $K \alpha H$, $E \# F$, $K \beta F$

Conclusions: I. $E \# H$ II. $H \delta F$

22). Statements: $B \# D$, $L \delta M$, $M \$ N$, $D \# N$

Conclusions: I. $D \# M$ II. $B \# L$

23). Statements: $W \beta Z$, $R \alpha W$, $Z \alpha M$

Conclusions: I. $R \beta M$ II. $R \# M$

24). Statements: $M \alpha N$, $H \$ Q$, $Q \alpha M$

Conclusions: I. $H \beta M$ II. $Q \beta N$

25). Statements: $L \# T$, $V \beta L$, $T \$ W$



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Conclusions: I.V # W II.T β W

Directions (Q. 26-30): In the following questions, the symbols *, \$, @, % and © are used with the following meanings as illustrated below:

P * Q means P is not greater than Q.

P \$ Q means P is not smaller than Q.

P @ Q means P is neither smaller than nor greater than Q.

P % Q means P is neither greater than nor equal to Q.

P © Q means P is neither smaller than nor equal to Q.

Now, in each of the following questions assuming the given statements to be true, find which of the conclusions

I, II, III and IV given below them is/are definitely true and give your answer accordingly.

26). Statements: L @ T, T \$ B, B % R, R © U

Conclusions: I. B % L II. B @ L III. U * T

- a) None is true
- b) Only I is true
- c) Only II is true
- d) Only III is true
- e) Either I or II is true

27). Statements: Z * X, X @ C, C % L, L \$ T

Conclusions: I. L © Z II. C \$ Z III. Z \$ T

- a) Only I and III are true
- b) Only I and II are true
- c) Only II and III are true



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d) All I, II and III are true

e) None is true

28). Statements: $U \% V, V * W, W \textcircled{C} S, S \$ X$

Conclusions: I. $X \% W$ II. $U \% W$ III. $V * X$

a) Only I is true

b) Only II is true

c) Only I and II are true

d) All I, II and III are true

e) None is true

29). Statements: $V @ B, L * B, L \$ R, R \% Z$

Conclusions: I. $Z \textcircled{C} B$ II. $R * V$ III. $L * V$

a) Only I is true

b) Only I and II are true

c) Only II and III are true

d) Only II is true

e) None is true

30). Statements: $W \textcircled{C} F, F \% D, D * K, K @ S$

Conclusions: I. $S \textcircled{C} F$ II. $K \textcircled{C} F$ III. $W \textcircled{C} K$

a) Only I and II are true

b) Only I and III are true

c) Only II and III are true

d) All I, II and III are true

e) None is true



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Directions (Q. 31-35): In the questions given below, certain symbols are used with the following meaning:

- 1) $A @ B$ means A is greater than B.
- 2) $A + B$ means A is either greater than or equal to B.
- 3) $A \# B$ means A is smaller than B
- 4) $A \% B$ means A is either smaller than or equal to B.
- 5) $A \$ B$ means A is equal to B

31). Statements: $G \$ K, F @ J, K + Q, Q + F$

Conclusions: I. $K \$ F$ II. $F \# K$ III. $G + F$

- a) Either I or II and III follows
- b) I and II only follows
- c) Only I follow
- d) II and III only follow
- e) None of these

32). Statements: $T \$ G, K @ P, M \# T, P + M$

Conclusions: I. $K @ T$ II. $G \$ P$ III. $T @ P$

- a) Only I and II follows
- b) Only II and III follow
- c) Only I and III follow
- d) None follows
- e) All follows

33). Statements: $G \$ E, D \# K, E \# S, K \% G$

Conclusions: I. $S @ D$ II. $D \# E$ III. $K + E$



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- a) Only I and II follows
- b) Only II and III follow
- c) Only I and III follow
- d) None follows
- e) None of these

34). Statements: R + N, S % B, A @ R, B \$ A

Conclusions: I. S \$ N II. A @ N III. A + S

- a) None follows
- b) Only I follow
- c) Only II follows
- d) Only III follows
- e) Only II& III follows

35). Statements: W @ S, K % Z, U + W, S \$ K

Conclusions: I. U @ K II. Z @ S III. W @ Z

- a) Only II follows
- b) Only I and III follow
- c) Only III follows
- d) Only I follow
- e) None of these

Directions (Q. 36-40): In these questions, the relationship between different elements is shown in the statements. Give answer

- 1) if only conclusion I follows.
- 2) if only conclusion II follows.



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3) if either conclusion I or II follows.

4) if neither conclusion I nor II follows.

5) if both conclusions I and II follow.

36). Statements: $Z = A \geq C < M, R > Z$

Conclusions: I. $R > C$ II. $A < M$

37). Statements: $N > A \geq C, P = N, P \leq L$

Conclusions: I. $N > C$ II. $L > A$

38). Statements: $S \leq K < M > W \geq Z$

Conclusions: I. $W < K$ II. $Z = S$

39). Statements: $S \leq L < R, S \geq N, P = N$

Conclusions: I. $P = S$ II. $R < N$

40). Statements: $L > M \geq P \leq S, Q < P, M < K$

Conclusions: I. $K = L$ II. $M \geq Q$

Directions (Q. 41-45): In each of these questions, relationship between two elements is shown in the statements. These statements are followed by two conclusions. Read the statements and give answer

1) if only conclusion I follows.

2) if only conclusion II follows.

3) if either conclusion I or II follows.

4) if neither conclusion I nor II follows.

5) if both conclusions I and II follow.

41). Statements: $A \geq F = E, D < G \leq E, P < D$



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Conclusions: I. $E \geq A$ II. $A > P$

42). Statements: $B > C > T < Q < L, R \geq Q, B < V$

Conclusions: I. $T = R$ II. $T < R$

43). Statement: $T \leq M > B = G > P \leq C$

Conclusions: I. $M \geq P$ II. $P < B$

44). Statement: $R \geq P \geq Q \leq S < T \geq M$

Conclusions: I. $T > Q$ II. $R > T$

45). Statement: $Q \geq C < D < P \geq R \geq O = B$

Conclusions: I. $Q > O$ II. $O \geq Q$

Directions (Q. 46-50): In these questions, relationships between different elements are shown in the statements. These statements are followed by two conclusions. Give answer

1) if only conclusion I follows.

2) if only conclusion II follows.

3) if either conclusion I or conclusion II follows

4) if neither conclusion I nor conclusion II follows.

5) if both conclusions I and II follow.

46). Statement: $R \geq S \geq T > U > X; T < V < W$

Conclusions: I. $R > X$ II. $X < W$

47). Statement: $E = F < G < H; G \geq I$

Conclusions: I. $H > I$ II. $E > I$

48). Statement: $A > B > F > C; D > E > C$



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Conclusions: I. $C < A$ II. $B > D$

49). Statement: $K \leq L \leq M = N; P \geq O \geq N$

Conclusions: I. $K < P$ II. $K = P$

50). Statement: $D < E < F < G; K > F$

Conclusions: I. $K \leq G$ II. $K > D$

Answers

1). Answer : C)

$M \leq N > L; R > N; P < F \leq L$

$F \leq L < N$

$R > N \geq M$

Hence, option c) only follows

2). Answer: C)

All given expressions does hold the two conditions are False except option c)

$L > M \geq N > O = P \geq Q < R$

$N > O = P \geq Q$

$L > M \geq N > O = P$

Hence, the answer is option c)

3). Answer: C)

$S \geq T > X = U ? Y \geq V > Z$

$S \geq T > X = U \geq Y$

$X = U \geq Y \geq V$



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Hence, the '>' symbol satisfies both the conditions.

4). Answer: A)

$$V = 0 \geq L > K; 0 \leq H$$

$$H \geq 0 \geq L > K$$

$$V = 0 \geq L > K$$

Hence, the '>' symbol satisfies both the conditions.

5). Answer: C)

6). Answer: C)

7). Answer: D)

8). Answer: B)

9). Answer: C)

10). Answer: C)

11). Answer: B)

12). Answer: D)

13). Answer: C)

14). Answer: B)

15). Answer: E)

16). Answer: C)

17). Answer : C)

$$M \leq N > L; R > N; P < F \leq L$$

$$F \leq L < N$$

$$R > N \geq M$$

Hence, option c) only follows

18). Answer: C)



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All given expressions does hold the two conditions

are False except option c)

$$L > M \geq N > O = P \geq Q < R$$

$$N > O = P \geq Q$$

$$L > M \geq N > O = P$$

Hence, the answer is option c)

19). Answer: C)

$$S \geq T > X = U ? Y \geq V > Z$$

$$S \geq T > X = U \geq Y$$

$$X = U \geq Y \geq V$$

Hence, the '>' symbol satisfies both the conditions.

20). Answer: A)

$$V = O \geq L ? K; O \leq H$$

$$H \geq O \geq L > K$$

$$V = O \geq L > K$$

Hence, the '>' symbol satisfies both the conditions.

21). Answer: A)

22). Answer: E)

23). Answer: C)

24). Answer: D)

25). Answer: D)

26). Answer: E)

27). Answer: B)

28). Answer: C)



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29). Answer: C)

30). Answer: A)

31). $G = K, F > J, K \geq Q, Q \geq F$

$K = F$

$F < K$

$G \geq F$

Either I or II and III follows

Answer: A

32). $T = G, K > P, M < T, P \geq M$

$K > T$

$G = P$

$T > P$

None follows

Answer: D

33). $G = E, D < K, E < S, K \leq G$

$S > D$ follows

$D < E$ follows

$K \geq E$ not follows

Answer: A

34). $R \geq N, S \leq B, A > R, B = A$

$S = N$ not follows

$A > N$ follows

$A \geq S$ follows

Answer: E



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35). $W > S, K \leq Z, U \geq W, S = K$

U > K follows

Z > S not follows

W > Z not follows

Answer: D

36). Answer: A)

37). Answer: E)

38). Answer: D)

39). Answer: D)

40). Answer: D)

41). Answer: B)

42). Answer: B)

43). Answer: B)

44). Answer: A)

45). Answer: C)

46). Answer: E)

47). Answer: A)

48). Answer: A)

49). Answer: C)

50). Answer: B)