

## Coded Inequalities

### Type I – Direct Inequalities

Directions (1-20): Study the following information carefully and answer the given 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)  $=$       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?

- 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)  $\leq$ ,  $<$       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

Directions (13-22): In these questions, relationship between different elements is show in the statements. The statements are followed by conclusions. Study the conclusions based on the given statements and select the appropriate answer:

- (a) If only conclusion I follows.  
(b) If only conclusion II follows.  
(c) If either conclusion I or II follows.  
(d) If neither conclusion I nor II follows.  
(e) If both conclusion I and II follow

13). Statements: $Z = A \geq C < M, R > Z$	Conclusions: I. $R > C$ II. $A < M$
14). Statements: $N > A \geq C, P = N, P \leq L$	Conclusions: I. $N > C$ II. $L > A$
15). Statements: $S \leq K < M > W \geq Z$	Conclusions: I. $W < K$ II. $Z = S$
16). Statements: $S \leq L < R, S \geq N, P = N$	Conclusions: I. $P \leq S$ II. $R < N$
17). Statements: $L > M \geq P \leq S, Q < P, M < K$	Conclusions: I. $K = L$ II. $M \geq Q$
18). Statements: $A \leq D < C \geq B < E$	Conclusions: I. $C > A$ II. $A \geq C$
19). Statements: $P > L \leq M < N > Q$	Conclusions: I. $P > Q$ II. $Q > M$
20). Statements: $S \geq T = U < V \geq X$	Conclusions: I. $V > S$ II. $V > T$
21). Statements: $M \leq N > O \geq P = Q$	Conclusions: I. $M \geq Q$ II. $Q < M$
22). Statements: $U \leq V < W = X < Y$	Conclusions: I. $Y > V$ II. $W > U$
23). Statements: $Z \leq K < D = S; D < A < O; G \geq D < R$	Conclusions: I. $G > A$ , II. $Z < R$
24). Statements: $E < L \leq P = B; L = Q$	Conclusions: I. $B > E$ , II. $Q \leq P$
25). Statements: $B > I = S \geq A < J \leq H; J > Q; K < Z$	Conclusions: I. $H > Q$ , II. $B < A$
26). Statements: $Z \geq Y \geq S > C \leq Q \leq L$	Conclusions: I. $Z > Q$ , II. $Y \leq L$
27). Statements: $C < R \leq N = M \geq F; Q \geq M < O; D \geq L$	Conclusions: I. $R \leq F$ , II. $C < Q$
28). Statements: $C < R \leq N = M \geq F; Q \geq M < O; D \geq L$	Conclusions: I. $Q \geq D$ , II. $F < O$
29). Statement: $B \geq C < M < E < A = F$	Conclusions: I. $F > M$ , II. $M < A$
30). Statement: $E \geq M > R < A = B > Q$	Conclusions: I. $E > B$ , II. $R > Q$

## **Type II – Coded Inequalities**

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

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:
- a) if only conclusion I is true.
  - b) if only conclusion II is true,
  - c) if either I or II is true.
  - d) if neither I nor II is true.
  - e) if both I and II are true.

31. Statements:  $T \$ G, K @ P, M \# T, P + M$   
Conclusions: I.  $K @ T$  II.  $G \$ P$

32. Statements:  $R + N, S \% B, A @ R, B \$ A$   
Conclusions: I.  $S \$ N$  II.  $A @ N$

33. Statements:  $G \$ K, F @ J, K + Q, Q + F$   
Conclusions: I.  $K \$ F$  II.  $F \# K$

34. Statements:  $W @ S, K \% Z, U + W, S \$ K$   
Conclusions: I.  $U @ K$  II.  $Z @ S$

35. Statements:  $G \$ E, D \# K, E \# S, K \times G$   
Conclusions: I.  $S @ D$  II.  $D \# E$

Directions (Q. 36-40): In the following questions the symbol \$, @, \*, \*\* and # 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 equal to B
- 4)  $A ** B$  means A is smaller than B
- 5)  $A \# B$  means A is either smaller than or equal to B

36. Statements:  $P @ Q, M \# N, N ** Q$   
Conclusions: I.  $P \$ M$  II.  $N \# P$

37. Statements:  $D ** X, F @ Y, D \$ F$   
Conclusions: I.  $X @ Y$  II.  $Y \# D$

38. Statements:  $M ** P, S \$ T, M @ T$   
Conclusions: I.  $S * M$  II.  $T ** P$

39. Statements:  $U * V, X \$ W, U ** W$   
Conclusions: I.  $W \$ V$  II.  $U ** X$

40. Statements:  $G \$ H, J \# K, H * K$   
Conclusions: I.  $H \$ J$  II.  $J * H$

Directions (Q. 41-47): In the following questions the symbols +, \*, ?, @ and S are used with the following meanings:

- 1)  $P + Q$  means P is neither smaller nor greater than Q.
- 2)  $P \times Q$  means P is neither equal to nor smaller than Q.
- 3)  $P ? Q$  means P is neither greater than nor equal to Q.
- 4)  $P @ Q$  means P is either greater than or equal to Q.

5)  $P \neq Q$  means P is not equal to Q.

41. Statements:  $P \neq Q$ ,  $Q \times R$ ,  $P + R$

Conclusions: I.  $Q \times P$  II.  $P \neq Q$  III.  $R \times P$

A. I only B. I and II only C. Either I or III only

D. All I, II and III E. None follows

42. Statements:  $A + B$ ,  $B \neq C$ ,  $C \neq A$

Conclusions: I.  $C \neq A$  II.  $B + C$  III.  $C \neq A$

A. None follows B. Only I C. Only II

D. Only III E. Only II & III

43. Statements:  $Y \neq Z$ ,  $Z \times Q$ ,  $Q \neq P$

Conclusions: I.  $Y \neq Q$  II.  $Y \neq P$  III.  $Z \neq P$

A. None follows B. Only I C. Only II

D. Only III E. Only II & III

44. Statements:  $E \times F$ ,  $F \neq L$ ,  $L + N$

Conclusions: I.  $N + F$  II.  $E \times L$  III.  $E \times N$

A. None follows B. Only I C. Only II

D. Only III E. Only II & III

45. Statements:  $H \neq J$ ,  $J \neq K$ ,  $K \times M$

Conclusions: I.  $H \neq M$  II.  $M \times J$  III.  $H \times K$

A. None follows B. Only I C. Only II

D. Only III E. Only II & III

46. Statements:  $M \neq T$ ,  $T + V$ ,  $V \neq E$

Conclusions: I.  $V + M$  II.  $V \neq M$  III.  $E \times T$

A. Only either I or II B. Only III C. Only I & II

D. All I, II & III E. Only either I or II and III

47. Statements:  $H \neq J$ ,  $J \neq K$ ,  $K \times M$

Conclusions: I.  $H \neq K$  II.  $M \times H$  III.  $H \times K$

A. None follows B. Only I C. Only II

D. Only III E. Only II & III

Directions (Q. 48-50): In the following questions the symbols \*,  $\times$ ,  $\neq$ ,  $\neq$  and + are used with the following meaning:

1) " $P \times Q$ " means "P is neither smaller nor greater than Q"

2) " $P \neq Q$ " means "P is neither equal to nor greater than Q"

3) " $P * Q$ " means "P is either equal to or smaller than Q"

4) " $P + Q$ " means "P is neither equal to nor smaller than Q"

5) " $P \neq Q$ " means "P is not equal to Q".

48. Statements:  $D * F$ ,  $F \neq M$ ,  $M \neq K$

Conclusions: I.  $F \neq K$  II.  $D \neq K$  III.  $D * M$

A. None follows B. Only I C. Only II

D. Only III E. Only II & III

49. Statements:  $K + M$ ,  $M \neq R$ ,  $R \times T$

Conclusions: I.  $K + T$  II.  $T + M$  III.  $R + K$

A. None follows B. Only I C. Only II

D. Only III E. Only II & III

50. Statements:  $T \neq M$ ,  $M * R$ ,  $R \times N$

Conclusions: I.  $M \times N$  II.  $M \neq N$  III.  $R \times N$

A. I only B. II and III only C. Either I or II only

D. All I, II and III E. None follows

## Answers

Q.No	Ans	Q.No	Ans	Q.No	Ans	Q.No	Ans	Q.No	Ans
1	C	11	B	21	D	31	D	41	D
2	C	12	D	22	E	32	B	42	B
3	C	13	A	23	B	33	C	43	A
4	A	14	E	24	E	34	A	44	E
5	C	15	D	25	A	35	E	45	A
6	C	16	A	26	D	36	A	46	E
7	D	17	D	27	B	37	D	47	A
8	B	18	A	28	B	38	B	48	A
9	C	19	D	29	E	39	B	49	C
10	C	20	B	30	D	40	C	50	C