CODED INEQUALITY

Directions: In these questions, relationship between different elements is shown in the statements. The statements are followed by two conclusions. 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.

1. **Statements:** $B > C = D \geq X; E \leq X; Z \geq D$

    Conclusions: I. $B > E$ **II.** $Z \geq B$

2. **Statements:** $E > F \geq G < H \leq I < J$

    Conclusions: I. $G \leq E$ **II.** $J \geq F$

3. **Statements:** $Y < A \geq B = C < Z$

    Conclusions: I. $C < Y$ **II.** $Z > Y$

4. **Statements:** $K \leq L < M > N \geq O; T > M \leq P$

    Conclusions: I. $T > K$ **II.** $P > O$

5. **Statements:** $P \geq T > Q \leq R < S; A \leq Q > W$

    Conclusions: I. $A \leq P$ **II.** $W < S$

6. **Statements:** $P \geq T > Q \leq R < S; A \leq Q > W$

    Conclusions: I. $W < P$ **II.** $R > P$

Directions: In each question given below certain symbols are used with the following meanings:

'P Δ Q' means P is greater than Q.

'P @ Q' mean P is either greater than or equal to Q.

'P ⚲ Q' means P is equal to Q.

'P # Q' mean P is smaller than Q.

'P $ Q' means P is either smaller than or equal to Q.

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.

Give answer (2): if only Conclusion II is true.

Give answer (3): if either Conclusion I or II is true.

Give answer (4): if neither Conclusion I nor II is true.

Give answer (5): if both Conclusions I and II are true.

7. **Statements:** A # B, C ⚲ A, D $ C, B Δ F

    Conclusions: I. B @ C

           II. F Δ C

8. **Statements:** A ⚲ B, C # D, A Δ F, B @ C

    Conclusions: I. B Δ F

           II. A @ C

9. **Statements:** A @ B, B ⚲ C, D Δ A, E # D

    Conclusions: I. B ⚲ E

           II. C $ A

10. **Statements:** A ⚲ B, C $ D, B Δ C, D # E

    Conclusions: I. C ⚲ B

           II. C # E

11. **Statements:** A ⚲ B, C # A, D Δ C, B @ E

    Conclusions: I. A Δ E

           II. A ⚲ E

Directions: In the following questions, the symbols @, ©, ⚲, $ and % are used with the following meaning as illustrated below:

'P ⚲ Q' means 'P is neither smaller than nor equal to Q'.

'P © Q' means 'P is neither greater than nor equal to Q'.

'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'.

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.

Give answer (2): if only Conclusion II is true.

Give answer (3): if either Conclusion I or II is true.

Give answer (4): if neither Conclusion I nor II is true.

Give answer (5): if both Conclusions I and II are true.

12. **Statements:** H @ K, K % D, D $ B

    Conclusions: I. H @ B

           II. B @ K

13. **Statements:** M % F, F © R, R ⚲ K

    Conclusions: I. K © F

           II. M ⚲ R

14. **Statements:** A ⚲ F, H @ F, M © H

    Conclusions: I. M © F

           II. A ⚲ H

15. **Statements:** R © M, M ⚲ W, T @ W

    Conclusions: I. T © M

           II. T©R

16. **Statements:** J © K, K @ D, D $ F

    Conclusions: I. F ⚲ K

           II. F $ K

Directions: In these questions symbols @, S, #, ★, and, % are used with different meanings as follows:

'A @ B' means 'A is smaller than B'.

'A $ B' means 'A is greater than B'.

'A # B' means 'A is either smaller than or equal to B'.

'A ★ B' means 'A is either greater than or equal to B'.

'A % B' means 'A is neither smaller than or greater than B'.

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

Give answer (1): if only conclusion I is true.

Give answer (2): if only conclusion II is true.

Give answer (3): if either conclusion I or conclusion II is true.

Give answer (4): if neither conclusion I nor conclusion II is true.

Give answer (5): if both conclusions I and II are true.

17. **Statements:** H#T, T@L, L%F
    Conclusions: I. F $ H
    II. H#L
18. **Statements:** V $ I, I ★ M, M # Q
    Conclusions: I. I # Q
    II. I ★ Q
19. **Statements:** P @ W, W ★ D, D $ J
    Conclusions: I. J @ P
    II. J @ W
20. **Statements:** E @ U, U % R, R $ F
    Conclusions: I. E $ F
    II. E ★ F
21. **Statements:** T # J, J ★ I, I @ W
    Conclusions: I. J @ W
    II. T % I

Directions : In the following questions, the symbols $, #, @, © and % are used with the following meaning as illustrated below:

'P @ Q' means 'P is not smaller than Q'.

'P $ Q' means 'P is not 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'.

'P © Q' means 'P is neither smaller than nor greater than Q'.

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.

22. **Statements:** H @ M, M $ D, D % N
    Conclusions: I. N # M
    II. N © H
23. **Statements:** R # T, T @ J, J © B
    Conclusions: I. B $ T
    II. J % R
24. **Statements:** M $ K, K # W, R @ W
    Conclusions: I. M % W
    II. R # K
25. **Statements:** Z © T, T % D, D # K
    Conclusions: I. K % Z
    II. D # Z
26. **Statements:** A % F, F © R, R $ B
    Conclusions: I. A % B
    II. B @ F

Directions (Q. 27-31): In the following questions, the symbols @, ©, %, $ and ✶ are used with the following meaning as illustrated below:

'P @ Q' means 'P is not smaller than Q'.

'P ✶ Q' means 'P is neither greater than nor equal to Q'.

'P © Q' means 'P is neither greater than nor smaller than Q'.

'P $ Q' means 'P is not greater than 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 three conclusions I, II and III given below them is/are definitely true and give your answer accordingly.

27. **Statements:** R @ V, V $ J, J ✶ K
    Conclusions: I. K % R **II.** J @ R **III.** K % V
    1) Only I is true
    2) Only II is true
    3) Only I and II are true
    4) Only III is true
    5) None of these
28. **Statements :** D % H, H @ V, V $ W
    Conclusions: I. H % W **II.** D % V **III.** D % W
    1) Only I is true
    2) Only II is true
    3) Only III is true
    4) All are true
    5) None of these
29. **Statements:** M $ T, T ✶ J, J © N
    Conclusions: I. N % M **II.** J % M **III.** M $ N
    1) Only I is true
    2) Only II is true
    3) Only I and II are true
    4) All are true
    5) None of these

30. **Statements:** N $ R, R © D, D ✷ K
   Conclusions: I. K % R   **II.** D % R   **III.** D @ R
   1) Only either II or III and I are true
   2) Only either II or III is true
   3) Only III is true 4) All are true
   5) None of these

31. **Statements:** F © K, K % M, M © T
   Conclusions: I. T ✷ K   **II.** F % M   **III.** T ✷ F
   1) Only I is true   2) Only II is true
   3) Only I and II are true   4) Only II and III are true
   5) All are true

   Directions: In the following questions, the symbols @, $, ϛ, © and # are used with the following meaning as illustrated below:

   'P ϛ Q' means 'P is neither greater than nor smaller than Q'.

   'P $ Q' means 'P is neither greater than nor equal to Q'.

   'P @ Q' means 'P is not smaller than Q'.

   'P © Q' means 'P is not greater than 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 three conclusions I, II and III given below them is/are definitely true and give your answer accordingly.

32. **Statements:** W @ T, T © M, M $ D
   Conclusions: I. W#D
                  II. W@M
                  III. D#T
   (1) Only I is true
   (2) Only II is true
   (3) Only III is true
   (4) Only II and III are true
   (5) None of these

33. **Statements:** F H R, R © M, M $ D
   Conclusions: I. D # R
                  II. D # F
                  III. M @ F
   (1) Only I and II are true
   (2) Only I and III are true
   (3) Only II and III are true
   (4) All I, II and III are true
   (5) None of these

34. **Statements:** V © M, M H B, B $ F
   Conclusions: I. F # M
                  II. B @ V
                  III. F # V
   (1) Only I and II are true
   (2) Only II and III are true
   (3) Only I and III are true
   (4) All I, II and III are true
   (5) None of these

35. **Statements:** D # N, N @ B, B H F
   Conclusions: I. F $ D
                  II. N # F
                  III. N H F
   (1) Only I is true
   (2) Only II is true
   (3) Only III is true
   (4) Only either II or III is true
   (5) Only I and either II or III are true

36. **Statements:** R $ T, T # K, K @ M
   Conclusions: I. R $ M
                  II. T # M
                  III. R $ K
   (1) None is true
   (2) Only I is true
   (3) Only II is true
   (4) Only III is true
   (5) Only II and III are true

CODED ENEQUALITY

1.1	2.4	3.4
4.5	5.2	6.1

(7-11):

$\Delta \Rightarrow >$

$@ \Rightarrow \geq$

$\star \Rightarrow =$

$\# \Rightarrow <$

$\$ \Rightarrow \leq$

7. 4; Statements:
A < B, C = A, D ≤ C, B > F
or, F < B = C ≥ D
Conclusions:
I. B @ C ⇒ B ≥ C (Not True)
II. F Δ C ⇒ F > C (Not True)

8. 5; Statements:
A = B, C < D, A > F, B ≥ C
or, F < A = B ≥ C < D
Conclusions:
I. B Δ F ⇒ B > F (True)
II. A @ C ⇒ A ≤ C (True)

9. 2; Statements:
A ≥ B, B = C, D > A, E < D
or, E < D > A ≥ B = C
Conclusions:
I. B ★ E ⇒ B = E (Not True)
II. C $ A ⇒ C ≤ A (True)

10. 2; Statements:
A = B, C ≤ D, B > C, D < E
or, A = B > C ≤ D < E
Conclusions:
I. C ★ B ⇒ C = B (Not True)
II. C # E ⇒ C < E (True)

11. 3; Statements:
A = B, C < A, D > C, B ≥ E
or, E ≥ A = B > C > D
Conclusions:
I. A Δ E ⇒ A > E (Either True)
II. A ★ E ⇒ A = E (Either True)
A is either greater than or equal to E.

(12-16):

$\text{⚡} \Rightarrow >$

$© \Rightarrow <$

$@ \Rightarrow \leq$

$\% \Rightarrow \geq$

$\$ \Rightarrow =$

12. 2; H @ K ⇒ H ≤ K
K % D ⇒ K ≥ D
D $ B ⇒ D = B
∴ H ≤ K ≥ D = B
Conclusion
I. H @ B ⇒ H ≤ M (Not True)
II. B @ K ⇒ B ≤ K (True)

13. 4; M % F ⇒ M ≥ F
F © R ⇒ F < R
R ⚡ K ⇒ R > K
∴ M ≥ F < R > K
Conclusion
I. K © F ⇒ K < F (Not True)
II. M ⚡ R ⇒ M > R (Not True)

14. 5; A ⚡ F ⇒ A > F
H @ F ⇒ F ≥ H
M © H ⇒ H > M
∴ A > F ≥ H > M
Conclusion
I. M © F ⇒ M < F (True)
II. A ⚡ H ⇒ A > H (True)

15. 1; R © M ⇒ R < M
M ⚡ W ⇒ M > W
T @ W ⇒ W ≥ T
∴ R < M > W ≥ T
Conclusion
I. T © M ⇒ T < M (True)
II. T © R ⇒ T < R (Not True)

16. 3; J © K ⇒ J < K
K @ D ⇒ K ≤ D
D $ F ⇒ D = F
∴ J < K ≤ D = F
Conclusion
I. F ⚡ K ⇒ F > K (Not True)
II. F $ K ⇒ F = K (Not True)
Clearly either conclusion I or conclusion II is true.

17. 1; H ☐ T … (i); T < L … (ii); L = F … (iii)
Combining these, we get H ☐ T < L = F.
Hence F > H and 1 follows.
But H < L and hence II (H ☐ L) does not follow.

18. 3; V > I … (i); I ☐ M … (ii); M ☐ Q … (iii)
From (ii) and (iii), I and Q can't be compared. But I and make a complementary pair. Hence either I (I ☐ Q) or II (I ☐ Q) follows.

19. 2; P < W … (i); W ☐ D … (ii); D > J … (iii)
From (ii) and (iii), W ☐ D > J or J < W … (iv). Hence II follows. However, from (i) and (iv) we can conclude that J and P can't be compared. Hence I does not follow.

20. 4; E < U … (i); U = R … (ii); R > F … (iii)
From (i) and (ii), E < R … (iv)
Now, from (iii) and (iv), E and F can't be compared. Hence neither I nor II follows.

21. 4; T ☐ J … (i); J ☐ I … (ii); I < W … (iii)
From (ii) and (iii), J and W can't be compared. Hence I does not follow.
From (i) and (ii), T and I can't be compared.

Hence II does not follow.

(22-26):

$@ \Rightarrow \geq$
$\$ \Rightarrow \leq$
$\% \Rightarrow <$
$\# \Rightarrow >$
$© \Rightarrow =$

22. 1; H @ M $\Rightarrow$ H $\geq$ M
M $\$$ D $\Rightarrow$ M $\leq$ D
D % N $\Rightarrow$ D < N
$\therefore$ H $\geq$ M $\leq$ D < N
Conclusion:
I. N # M $\Rightarrow$ N > M (True)
II. N © H $\Rightarrow$ N = H (Not True)

23. 5; R # T $\Rightarrow$ R > T
T @ J $\Rightarrow$ T $\geq$ J
J © B $\Rightarrow$ J = B
$\therefore$ R > T $\geq$ J = B
Conclusion:
I. B $\$$ T $\Rightarrow$ B $\leq$ T (True)
II. J % R $\Rightarrow$ J > R (True)

24. 4; M $\$$ K $\Rightarrow$ M $\leq$ K
K # W $\Rightarrow$ K > W
R @ W $\Rightarrow$ R $\geq$ W
$\therefore$ M $\leq$ K > W $\leq$ R
Conclusion:
I. M % W $\Rightarrow$ M < W (Not True)
II. R # K $\Rightarrow$ R > K (Not True)

25. 2; Z © T $\Rightarrow$ Z = T
T % D $\Rightarrow$ T < D
D # K $\Rightarrow$ D > K
$\therefore$ Z = T < D > K
Conclusion:
I. K % Z $\Rightarrow$ K < Z (Not True)
II. D # Z $\Rightarrow$ D > Z (True)

26. 5; A % F $\Rightarrow$ A < F
F © R $\Rightarrow$ F = R
R $\$$ B $\Rightarrow$ R $\leq$ B
$\therefore$ A < F = R $\leq$ B
Conclusion:
I. A % B $\Rightarrow$ A < B (True)
II. B @ F $\Rightarrow$ B $\geq$ F (True)

27. 4; R $\geq$ V ... (i); V $\leq$ J ... (ii); J < K ... (iii)
From (ii) and (iii), we get K > J $\geq$ V ... (iv) From (i) and (iv) R can't be compared with K or J. Hence I and II do not follow. But, from (iv), K > V. Hence III follows.

28. 2; D > H ... (i); H $\geq$ V ... (ii); V $\leq$ W ... (iii)
From (i) and (ii), V $\leq$ H < D ... (iv)
From (iii) and (iv), W can't be compared with H or D. Hence I and III do not follow. But, from (iv), D > V. Hence II follows.

29. 3; M $\leq$ T ... (i); T < J ... (ii); J = N ... (iii)
Combining these, we get M $\leq$ T < J = N.
Hence N > M. So I (N > M) follows.
But III (M $\leq$ N) does not follow.
Again, J > M. Hence II follows.

30. 5; N $\leq$ R ... (i); R = D ... (ii); D < K ... (iii)
Combining these, we get N $\leq$ R = D < K.
Hence K > R and I follows.
Again, D = R. Hence II (D > R) or III (D $\geq$ R) does not follow.
Only I is definitely true.

31. 5; F = K ... (i); K > M ... (ii); M = T ... (iii)
Combining these, we get F = K > M = T.
Hence T < K and I follows.
Again, F > M and II follows.
Also, T < F and III follows.

32. 3; W @ T $\Rightarrow$ W $\geq$ T
T © M $\Rightarrow$ T $\leq$ M
M $\$$ D $\Rightarrow$ M < D
$\therefore$ W $\geq$ T $\leq$ M < D
Conclusions:
I. W # D $\Rightarrow$ W > D (Not True)
II. W @ M $\Rightarrow$ W $\geq$ M (Not True)
III. D # T $\Rightarrow$ D > T (True)

33. 4; F ⍟ R $\Rightarrow$ F = R
R © M $\Rightarrow$ R $\leq$ M
M $\$$ D $\Rightarrow$ M $\leq$ D
$\therefore$ F = R $\leq$ M < D
Conclusions:
I. D # R $\Rightarrow$ D > R (True)
II. D # F $\Rightarrow$ D > F (True)
III. M @ F $\Rightarrow$ M $\geq$ F (True)

34. 4; V © M $\Rightarrow$ V $\leq$ M
M ⍟ B $\Rightarrow$ M = B
B $\$$ F $\Rightarrow$ B < F
$\therefore$ V $\leq$ M = B < F
Conclusions:
I. F # M $\Rightarrow$ F > M (True)
II. B @ V $\Rightarrow$ B $\geq$ V (True)
III. F # V $\Rightarrow$ F > V (True)

35. 5; D # N $\Rightarrow$ D > N
N @ B $\Rightarrow$ N $\geq$ B
B ⍟ F $\Rightarrow$ B = F
$\therefore$ D > N $\geq$ B = F
Conclusions:
I. F $\$$ D $\Rightarrow$ F < D (True)
II. N # F $\Rightarrow$ N > F ⎱
III. N ★ F $\Rightarrow$ N = F ⎰ Either II or III is true

36. 3; R $\$$ T $\Rightarrow$ R < T
T # K $\Rightarrow$ T > K
K @ M $\Rightarrow$ K $\geq$ M
$\therefore$ R < T > K $\geq$ M
Conclusions:
I. R $\$$ M $\Rightarrow$ R < M (Not True)
II. T # M $\Rightarrow$ T > M (True)
III. R $\$$ K $\Rightarrow$ R < K (Not True)