Test Your Skills

Mathematical Inequality & Coded Inequality

(For Bank PO)

Directions 1-5: There are two equations are given I and II. You solved them and answer

(1) if x>y
(2) if $x \geq y$
(3) if x<y
(4) if $x \leq y$
(5) if x = y or not relation make

1. I. $\sqrt{x}-\sqrt{6}/\sqrt{x}=0$ II. $y^3-6^{\left(\frac{3}{2}\right)}=0$
2. I. $3x-2y=10$ II. $5x-6y=6$
3. I. $x^2+x-12=0$ II. $y^2-5y+6=0$
4. I. $x^2-9x+18=0$ II. $y^2-13y+40=0$
5. I. $\sqrt{x+6}=\sqrt{121}-\sqrt{36}$ II. $y^2+112=473$

Directions 6-10 : There are two equations are given I and II. You solved them and answer

(1) if x>y
(2) if $x \geq y$
(3) if x<y
(4) if $x \leq y$
(5) if x= y or not relation make

6. I. $20x^2-x-12=0$ II. $20y^2-27y+9=0$
7. I. $x^2-218=106$ II. $y^2-37y+342=0$
8. I. $\frac{7}{\sqrt{x}}+\frac{5}{\sqrt{x}}=\sqrt{x}$ II. $y^2-\frac{(12)^{5/2}}{\sqrt{y}}=0$
9. I. $\sqrt{361}x+\sqrt{16}=0$ II. $\sqrt{441}y+4=0$
10. I. $\frac{15}{\sqrt{x}}-\frac{2}{\sqrt{x}}=6\sqrt{x}$ II. $\frac{\sqrt{y}}{4}+\frac{7\sqrt{y}}{12}=\frac{1}{\sqrt{y}}$

Directions 11-15: For the two given equations I and II. Give answer :

(1) If p is greater than q
(2) If p is smaller than q
(3) If p is equal to q
(4) if p is either equal to or greater than q
(e) If p is either equal to or smaller than q

11. I $6p^2+5p+1=0$
    II. $20q^2+9q=-1$
12. I. $3p^2+2p-1=0$
    II. $2q^2+7q+6=0$
13. I. $3p^2+15p=-18$ II. $q^2+7q+12=0$
14. I. $p=\frac{\sqrt{4}}{\sqrt{9}}$ II. $9q^2-12q+4=0$
15. I. $p^2+13p+42=0$ II. $q^2=36$

Directions (16-17): Study the following information carefully and answer the questions given below: In each of the following, question relationship between different elements is shown in the statements. The statements are followed by two conclusions numbered I and II. Study the conclusions based on the given statement and select the appropriate answer.

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

Statements: L ≤ E=A>P; Y>E>R

16. Conclusions : I: Y ≥ L II: A>R
17. Conclusions : I.P ≥ R II. A ≤ Y

Directions 18-22: In these questions, relatinship between different elements is shown in the statements. The statements are followed by two conclusions.

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 conclusions I nor II is true
Give answer (5) If both conclusions I and II are true

18. Statements: A ≥ B=C ≤ D
    Conclusions: I.A ≥ C II. D>A
19. Statements: P<Q= M ≥ N<O
    Conclusions: I. Q>O II. P<M
20. Statements : T>R<S=U>V;U ≥ M
    Conclusions: I. M ≥ R II. T ≤ M
21. Statements: Q ≤ P ≥ M ≤ N= T; N ≤ O
    Conclusions: I. O ≥ T II. O ≤ Q
22. Statements: D>E=F ≤ C ≥ P<Q
    Conclusions: I. E<Q II. F ≥ P

Directions 23-27: 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 greater than nor smaller than Q'.

23. **Statements:** J $ K, K *T, T@ N, N©R
    Conclusions : I. J $ T II. R *T III. N $ K IV. R*K

Gupta Classes

(a) None is true (b) Only I is true
(c) Only II is true (d) Only III is true
(e) Only IV is true

24. Statements: F % W, W © R, R @M,M $ D
Conclusions: I. D@R II. M $ F III. R@D IV. R *F
(a) None is true
(b) Only I is true
(c) Only II is true
(d) Only IV is true
(e) Only III is true

25. Statements: H @ B, B*E, V©E, W$V
Conclusions: I. W $ E II. H @E III. H @V IV. W $ B
(a) Only I and II are true
(b) Only I, II and III are true
(c) Only II, III and IV are true
(d) All I , II, III and IV are true
(e) None of these

26. Statements: R © K,K*N, N $ J, J % H
Conclusion : I. R $ N II. J @K III. H @N IV. R $ H
(a) None is true
(b) Only I is true
(c) Only II is true
(d) Only IV is true
(e) Only III is true

27. Statements: K * D,D$ N, N% M, M © W
Conclusions: I. M @ K II. N @ K III. M @D IV. W*N
(a) Only I and II are true
(b) Only I, II and III are true
(c) Only III and IV are true
(d) All I, II, III and IV are true
(e) None of these

Directions 28-32: In the following questions , the symbols @, ©, $, % and * are used with the following meaning as illustrated below:
'P © Q' means 'P is not greater than Q'
'P % Q' means 'P is smaller than Q'
'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 neither greater than nor smaller 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 Conclusions 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.

28. Statements: K @ V, V © N, N % F
Conclusions: I. F @ V II. K @ N

29. Statements: H © W, W $ M, M @ B
Conclusions: I. B*H II. M% H

30. Statements: D% B, B* T, T$ M
Conclusions: I. T © D II. M © D

31. Statements : M * T, T @ K, K © N
Conclusions: I. N * T II. N * M

32. Statements: R $ J, J % D, D * F
Conclusions: I. D $ R II. D @ R

Directions: 33-34: In the following questions, the symbols δ , @, ©,% 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 smaller than nor equal to Q"
'P * Q' means 'P is neither greater than nor equal to Q'
'P δ Q' means 'P is not greater than Q'
'P @ Q' means 'P is neither greater than nor smaller than Q'
Now in each of the following questions assuming the given statements to be true, find which of the four conclusions I, II, III and IV given below them is/are definitely true and give your answer accordingly

33. Statements :
R* K, K% D, D@ V, V δ M
Conclusions : I. R * D II. V * R III. D @ M IV. M % D
(a) None is true
(b) Only III is true
(c) Only IV is true
(d) Only either III or IV is true
(e)Only either III or IV and II are true

34. Statements: F % N, N © W, W δ Y, Y * T
Conclusions: I. F % W II. T % N III. N% Y IV. T % W
(a) Only I and III are true
(b) Only I and IV are true
(c) Only II and III are true
(d) Only I, II and IV are true
(e) None of these

Directions : In these questions, relationship between different elements is shown in the statements. These statements are followed by two conclusions.
Mark answer If
(1) Only conclusion I follows
(2) Only conclusion II follows
(3) Either conclusion I or II follows
(4) Neither conclusions I nor II follows
(5) Both conclusions I and II follows

35. Statements : E< F $\leq$ G= H > S
Conclusions: I. G> S II. F$\leq$ H