MATHEMATICAL OPERATION

Directions (Que. 1 to 5) : In the following questions, the symbols @, #, $, %, * are ised with the following meaning as illustrated below :

'A @ B' means 'A is not greater than B' ;

'A # B' means 'A is greater than or equal to B';

'A $ B' means 'A is neither greater than nor less than B';

'A % B' means 'A is less than B';

'A * B' means 'A is neither less than nor equal to B'.

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 islare definitely true.

1. **Statements :** K @ L, L % N, E # N

Conclusions : I. K % E II. E * L III. N * K

(a) Only I and II are true (b) Only II and III are true

(c) Only I and III are true (d) All are true

2. **Statements :** D $ T, T * P, M @ P

Conclusions : I. D * M II. M % T III. D # P

(a) Only I is true (b) Only I and II are true

(c) All are true (d) Only I and III are true

3. **Statements :** T # R, R % L, L * K

Conclusions : I. T % L II. K * R III. T # K

(a) Only I is true (b) Only I and II are true

(c) All are true (d) None of these

4. **Statements :** N % S, S # U, U * M

Conclusions : I. M % S II. N % U III. N * M

(a) Only I is true (b) Only II is true

(c) All are true (d) None is true

5. **Statements :** C $ J, J % V, E @ V

Conclusions : I. E % J II. C * V III. C * E

(a) None is true (b) Only II is true

(c) Only III is true (d) All are true

6. If P means 'division', T means 'addition', M means 'subtraction' and D means 'multiplication', then what be the value of the expression 12 M 12 D 28 P 7 T 15 ?

(a) –30 (b) –15

(c) 15 (d) 45

7. If P denotes ÷, Q denotes ×, R denotes –, then what is the value of 18 Q 12 P 4 R 5 S 6 ?

(a) 53 (b) 59

(c) 63 (d) 65

8. If Q means 'add to', J means 'multiply by', T means 'substract from' and K means 'divide by', then 30 K 2 Q 3 J 6 T 5 = ?

(a) 18 (b) 28 (c) 31 (d) 103

9. If + stands for ×, – for ÷, × for – and ÷ for +, find the value of 26 + 74 – 4 × 5 ÷ 2

(a) 220 (b) 376 (c) 478 (d) 488

10. If '+' means 'divided by', '–' means 'add', '×' means 'minus' and '/' means 'multiplied by' what will be the value of the following expression ?

$[\{(17 \times 12) - (4/2)\} + (23 - 6)]/0$

(a) infinite (b) 0

(c) 118 (d) 219

11. If A > B, B > C and C > D, then which of the following conclusions is definitely wrong ?

(a) A > D (b) A > C

(c) D > A (d) B > D

12. If A + D = B + C, A + E = C + D, 2C < A + E and 2A > B + D, then

(a) A > B > C > D > E (b) B > A > D > C > E

(c) D > B > C > A > E (d) B > C > D > E > A

13. If A + B > C + D, B + E = 2C and C + D > B + E, it necessarily follows that

(a) A + B > 2E (b) A + B > 2C

(c) A > C (d) A + B > 2D

14. If A + E = B + D, A + B > C + E, A + D = 2B, C + E > B + D, then

(a) A > B > C > D > E (b) C > B > D > A > E

(c) C > B > A > E > D (d) C > A > B > D > E

15. If A + B = 2C and C + D = 2A, then

(a) A + C = B + D (b) A + C = 2D

(c) A + D = B + C (d) A + C = 2B

Directions (Ques. 16 to 18) : In each of the following quesitons, if the given interchanges are made in signs and numbers, which one of the four equations would be correct ?

16. Given interchanges : Signs – and ÷ and numbers 4 and 8.

(a) 6 – 8 ÷ 4 = –1 (b) 8 – 6 ÷ 4 = 1

(c) 4 ÷ 8 – 2 = 6 (d) 4 – 8 ÷ 6 = 2

17. Given interchanges : Signs + and × and numbers 4 and 5.

(a) 5 × 4 + 20 = 40 (b) 5 × 4 + 20 = 85

(c) 5 × 4 + 20 = 104 (d) 5 × 4 + 20 = 95

18. Given interchanges : Signs + and – and numbers 4 and 8.

(a) 4 ÷ 8 – 12 = 16 (b) 4 – 8 + 12 = 0

(c) 8 ÷ 4 – 12 = 24 (d) 8 – 4 ÷ 12 = 8

Directions (Ques. 19 to 20) : In each of the following questions, which one of the four interchanges in signs and numbers would make the given equation correct ?

19. 6 × 4 + 2 = 16

(a) + and ×, 2 and 4 (b) + and ×, 2 and 6

(c) + and ×, 4 and 6 (d) None of these

20. (3 ÷ 4) + 2 = 2

(a) + and ÷, 2 and 3 (b) + and ÷, 2 and 4

(c) + and ÷, 3 and 4 (d) No,interchange, 3 and 4

Answer Key (Mathematical Operations)

1. (d)	**2.** (b)	**3.** (d)	**4.** (a)	**5.** (a)	**6.** (d)	**7.** (a)	**8.** (b)	**9.** (c)	**10.** (b)
11. (c)	**12.** (b)	**13.** (b)	**14.** (d)	**15.** (a)	**16.** (c)	**17.** (c)	**18.** (b)	**19.** (c)	**20.** (a)