

**NATIONAL MANAGEMENT COLLEGE, THUDUPATHI.**

**PAPER – 3: BUSINESS MATHEMATICS, LOGICAL REASONING AND STATISTICS  
MONTHLY TEST 7**

**Time Allowed : 1 hour**

**Maximum Marks: 50**

DATE – 23.02.23

ANSWER ALL..

1) . Gopal started walking 2km straight from his school. Then he turned right and walks 1km. Again he turned right and walked 1km to reach his house. If his house is south-east from his school, then in which direction did Gopal start walking from the school?

A) East                  B) West                  C) South                  D) North

2) . Five boys A , B, C, F, E, are sitting in a park in a circle. A facing South-west, D is facing South-east, B and E are right opposite A and D respectively and C is equidistant between D and B. Which direction is C facing?

A) West                  B) South                  C) North                  D) East

3) A child goes 50 meter towards South and then turning to his right, he goes 50 meter. Then, turning to his left, he goes 30 meter. Again he turns to his left and goes 50 meter. How far is he from his initial position?

(a) 30 m                  (b) 40 m                  (c) 50 m                  (d) 80 m

4) If  $A \times B$  means A is to the south of B;  $A + B$  means A is to the north of B;  $A \% B$  means A is to the east of B ;  $A - B$  means A is to the west of B ; then in  $P \% Q + R - S$ , S is in which direction with respect to Q ?

a) south east                  b) north east                  c) north west                  d) south west

5) one morning after sunrise Nivedita and Niharika were talking to each other face to face at Dalphin crossing. If Niharika's Shadow was exactly to the right of nivedita, which direction Niharika was facing ?

a)North                  b) south                  c) East                  d)west

6) A man is facing west. He turns 45 degree in the clockwise direction and then another 180 degree in the same direction and then 270 degree in the anticlockwise direction. Find which direction he is facing now ?

- a) South-West                      b) West                      c) South                      d) East-South

7) Sidhu, Chinu, Partha, Verma, Nitish, Keshab, Amit and Rashmi are sitting around a circle facing the centre. Nitish is third to the right of Amit who is not an immediate neighbor of either Partha or Rashmi. Partha is second to the left of Rashmi who is third to the left of Sidhu. Chinu is fourth to the right of Rashmi.

What is Sidhu position with respect to Keshab?

- a) second to the right                      b) fifth to the right  
c) fourth to the right                      d) second to the left

8) Read the following information carefully to answer the given questions. Six  
people P, Q, R, S, T and U are sitting on the ground in a hexagonal shape.

All the sides of the hexagon, so formed are of same length.

I . P is not adjacent to Q or R.

II. S is not adjacent to R or T.

III. Q and R are adjacent.

IV . U is in the middle of S and R.

Who is at the same distance from S as T is from S?

- a) Q                      b) R                      c) S                      d) U

9) In a gathering seven members are sitting in a row. 'C' is sitting left to 'B' but on the right to 'D'. 'A' is sitting right to 'B'. 'F' is sitting right to 'E' but left to 'D'. 'H' is sitting left to 'E'. Find the person sitting in the middle.

- a) C                      b) D                      c) E                      d) F



19) In a certain language MADRAS is coded as NBESBT, how BOMBAY is coded in that language?

- (a) CPNCBX                      (b) CPNCBZ                      (c) CPOCBZ                      (d) CQOCBZ

20) 18, 24, 21, 27, ?, 30, 27

- (a) 33                      (b) 30                      (c) 24                      (d) 21

21) If F = 6, MAT = 34, then how much is CAR?

- (a) 21                      (b) 22                      (c) 25                      (d) 28

22) If in a certain language NAME is written as 4258 then what is coded as MEAN?

- (a) 2458                      (b) 5842                      (c) 8524                      (d) 5824

23) 1, 4, 9, 16, 24, 25, 36

- (a) 9                      (b) 24                      (c) 25                      (d) 36

24) A man is facing east, and then he turns left and goes 10 m, then turns right and goes 5 m then goes 5 m to the South and from there 5 m to West. In which direction is to be from his original place?

- (a) East                      (b) West                      (c) North                      (d) South

25) Given  $x = 2y + 4$  and  $y = kx + 6$  are the lines of regression of  $x$  on  $y$  and  $y$  on  $x$  respectively. Find the value of  $k$ , if value of  $r$  is 0.5

- a)  $1/8$                       b)  $1/3$                       c)  $1/2$                       d)  $1/4$

26) If coefficient of correlation  $r_{xy} = 1$  then

- a) Regression lines become identical                      b) Perfect linear co relationship is observed

- c)  $b_{yx} = 1/b_{xy}$                       d) all of the above

27) If a statistics professor tells his class, " All those who got 100 on the statistics test got 20 on the mathematics test, and all those that got 100 on mathematics test got 20 on the statistics test", he is saying that the correlation between the statistics test and the mathematics test is

- A) negative                      b) positive                      c) zero                      d) none of the above

$\sum xy = 414, \sum x = 120, \sum y = 90, \sum y^2 = 300, \sum x^2 = 600, n = 30$ . Later on, it was known that two pairs of observation (12, 11) and (6, 8) were wrongly taken, the correct pairs of observations being (10, 9) and (8, 10). The corrected value of the correlation coefficient is

- A. 10 km      B. 15 km      C. 20 km      D. 25 km

37) If  $A \times B$  means A is to the south of B;  $A + B$  means A is to the north of B;  $A \% B$  means A is to the east of B;  $A - B$  means A is to the west of B; then in  $P \% Q + R - S$ , S is in which direction with respect to Q?

- A. South-West      B. South-East      C. North-East      D. North-West

38) Village Q is to the North of the village P. The village R is in the East of Village Q. The village S is to the left of the village P. In which direction is the village S with respect to village R?

- A. West      B. South-West      C. South      D. North-West

39) Two regression lines are  $x + 2y - 5 = 0$  &  $2x + 3y - 8 = 0$ . If variance of  $y$  is 4 then variance of  $x$  is

- a) 12      b) 16      c)  $3/16$       d)  $16/3$

40). For a perfectly correlated variables,  $b_{xy} = -0.5$  then the value of  $b_{yx}$  is

- a) 2      b) -2      c)  $\pm 5$       d)  $\pm\sqrt{2}$

41). If the plotted points in a scatter diagram are evenly distributed, then the correlation is

- (a) Zero      (b) Negative      (c) Positive      (d) (a) or (b)

42. In calculating the Karl Pearson's coefficient of correlation it is necessary that the data should be of numerical measurements. The statement is

- (a) valid      (b) not valid      (c) both      (d) none

43. Rank correlation coefficient lies between

- (a) 0 to 1      (b) -1 to +1 inclusive of these value  
(c) -1 to 0      (d) both

44. Under Algebraic Method we get ——— linear equations .

- (a) one      (b) two      (c) three      (d) none.

45) The Bowley's Price index number is represented in terms of :

- (a) A.M. of Laspeyre's and Paasche's Price index number.  
(b) G.M. of Laspeyre's and Paasche's Price index number.  
(c) A.M. of Laspeyre's and Walsh's price index number.

(d) None of these

46. The quantity Index number using Fisher's formula satisfies :

(a) Unit Test

(b) Factor Reversal Test.

(c) Circular Test.

(d) Time Reversal Test.

47. Purchasing Power of Money is

(a) Reciprocal of price index number.

(b) Equal to price index number.

(c) Unequal to price index number.

(d) None of these.

48. The price level of a country in a certain year has increased 25% over the base period. The index number is

(a) 25

(b) 125

(c) 225

(d) 2500

49. Consumer Price index number for the year 1957 was 313 with 1940 as the base year. If the Average Monthly wages in 1957 of the workers in a factory be RS 160/- their real wages is

(a) 48.40

(b) 51.12

(c) 40.30

(d) None of these.

50. ) Pointing to a photograph, a Man said "His Mother husband's sister is my aunt". Then what is relation between a man and he?

(a) Son

(b) Uncle

(c) Nephew

(d) Brother