QP CODE: 24019188

Reg No : ....

Name : ....

BBM DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE EXAMINATIONS, MAY 2024

Second Semester

Bachelor of Business Management

Complementary Course - BM2CMT09 - BUSINESS STATISTICS II

2017 ADMISSION ONWARDS

B03EEBE5

Time: 3 Hours   Max. Marks : 80

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Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. Give the characteristics of Index numbers.

2. What are Quantity Index numbers?

3. Define Circular test for Index numbers.

4. List the various components of Time series.

5. State Principle of Least squares.

6. State Multiplication theorem for Independent events.

7. Define Conditional probabiltiy.

8. Give Newtons Forward interpolation Formula.

9. Define Extrapolation.

10. List the various steps involved in the graphical solution of a LPP.

11. Define an unbalanced TP.

12. Defien an Assignment Problem.

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Calculate simple index number by average of price relative method.

ITEMS	PRICE IN BASE YEAR	PRICE IN CURRENT YEAR
1	05	07
2	10	12
3	15	25
4	20	18
5	08	09

14. Define a Time series. What is the importance of analysing a Time series?

15. Explain the Method of Semi-average.

16. Two unbiased dice are thrown. Find the probability that (1) both dice show the same number (2) One die shows five (3) First die shows five (4) the total of the number on the dice is eight (5)the total of the numbers on the dice is greater than eight.

17. A card is drawn from a well shuffled pack of 52 cards. What is the probabilty of the card being black or an ace?

18. A speaks truth in 60% cases and B in 70% cases. In what percentage of cases are they likely to contradict each other?

19. Distinguish between Interpolation and Extrapolation.

20. The following table gives the amount spent for pension payment on the closing date of various financial years.

    Year (X):   1971   1975   1977   1980   1981
    Amount of pension (Y):   105   191   309   487   643

    Construct the divided difference table.

21. Briefly explain the Lowest Cost Entry Method of obtaining an IBFS for a TP.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. The following tables gives the group index numbers and the weights of different heads of expenditure in the calculation of cost of living index except the index for the group ' Fuel and lighting'. If the cost of living index is 193, find the index onumber of fuel and lighting group.

GROUP	INDEX	WEIGHT
food	221	35
clothing	198	14
fuel and lighting	-	15
rent	183	08
miscellaneous	161	20

23. From the following data find trend values using 3 year moving average method

Year : 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000
Value: 170 231 261 264 278 302 289 297 340 273

24. Given the following values log 200 = 2.3010, log 210 = 2.3222, log 225 = 2.3522, log 230 = 2.3617. Find log 220 by Lagrange's method.

25. Five different machines can do any one of the five required jobs with different profits resulting from each assignment as shown below. Find out maximum profit possible through optimum assignment.

	A	B	C	D	E
1	30	37	40	28	40
2	40	24	27	21	36
3	40	32	33	30	35
4	25	38	40	36	36
5	29	62	41	34	39

(2×15=30)