FYBMS
23

C.I.	0-10	10-20	20-30	30-40	40-50
F	12	13	16	15	14

Q3) SOLVE THE FOLLOWING **8+7=15 M**

A) Find Spearman's Rank correlation from the following data.

X	101	108	105	107	109
Y	117	98	102	115	108

B) x bar = 10, y bar = 8, $\sigma x = 4$, $\sigma y = 7$, r =0.4, estimate the value of x when y is 20. Estimate the value of y when x is 25.

OR

Q3) SOLVE THE FOLLOWING. **8+7=15 M**

C) Find the 3 yearly moving average from the following data.

Year	2015	2016	2017	2018	2019	2020	2021	2022
Sales	23	25	27	29	31	29	33	35

D) FIND THE INDEX NUMBERS OF LESPEYERS, PAASCHES, FISHERS, DORBISH-BOWLEYS & MARSHALL-EDGEWORTH.

COMMODITY	2015 (BASE YEAR)		2020 (CURRENT YEAR)	
	PRICE - P0	QUANTITY – Q0	PRICE – P1	QUANTITY – Q1
A	12	8	15	6
B	15	7	20	5
C	18	6	20	4
D	20	5	25	3

Q4) SOLVE THE FOLLOWING **8+7=15 M**

A) Find the best course of action using EMV.

Payoff table

STATE OF NATURE	COURSE OF ACTION (IN LACS)				PROBABILITY
	A1	A2	A3	A4	
S1	50	60	70	40	0.4
S2	60	75	75	60	0.3
S3	70	80	80	80	0.2
S4	85	65	40	90	0.1

B) **Find the best course of action using (i) maximin criteria and (ii) laplace criteria (iii) Minimin criteria (iv) Maximax criteria**

STATE OF NATURE	COURSE OF ACTION				
	A1	A2		A3	A4
S1	79	68		72	65
S2	75	62		70	70
S3	83	66		75	75
S4	76	70		72	80

OR

Q4) SOLVE THE FOLLOWING **8+7=15 M**

C) If two dices are cast at a time. Find the probability of getting (i) sum of both is 9 (ii) both are equal numbers.

D) if Three coins tossed at a time find the probability of getting (i) all heads (ii) no heads (iii) at least one head.

Q5) WRITE SHORT NOTES ON ANY 3 **8+7=15 M**

1. Secondary data
2. Scattered diagram
3. Merits of mean
4. Regression formulas
5. Time series and types

XXXXXXXXXXXXXXXX

Seat Number :- _____

Duration: 2 1/2Hrs PROC514NBE **Marks:- 75**

Note:- 1) All questions are compulsory
2) All questions carry equal marks
3) Figures to the right indicate maximum marks.

Q.1A) State the following statements are true or false (Any 8) **(08 M)**

1) Many economic decisions depend on marginal analysis.
2) The market supply curve slopes upwards to the right.
3) The monopoly firm faces a downward sloping demand curve.
4) Promotion elasticity is always positive
5) Expert opinion method is more accurate and reliable
6) Division of labor leads to labor economy
7) Total cost is summation of AVC and AFC
8) Total cost curve starts from above the origin.
9) Under perfect competition there is uniform price in the market
10) The monopolist has full control over the entire market supply

Q.1B) Match the following (Any 7) **(07 M)**

A	B
1. Transfer pricing	1. Explicit cost
2. Oligopoly	2. Normal goods
3. Break even analysis	3. Intra – firm pricing
4. Accounting cost	4. Few seller
5. Constant return to scale	5. Cost – Volume- Profit Analysis
6. Statistical method	6. Marginal revenue and cost
7. Positive income elasticity	7. Horizontal straight line
8. Perfect competition	8. Quantitative method
9. Marginal concept	9. Horizontal demand curve
10. Market supply curve	10. Upward sloping

Q.2) Answer any 2 of the following:

1) Explain market demand curve with the help of market demand schedule. **(07 M)**
2) Calculate the following. **(08 M)**
   (a) Q=100 – 5p , is the linear demand what is the total expenditure at P = Rs.20 and Rs.10
   (b) Qd= 100-5p find the quantity demanded for price Rs. 6 and Rs. 3

OR

1) Explain the importance of business. **(07 M)**
2) For the demand equation Q= 90-3p **(08 M)**
   (a) What is the quantity demanded for price of Rs. 8
   (b) What price one would be willing to pay if the quantity demanded is Rs. 60.