

B.B.A. - I (NEP) Semester-I
BSL-3 - Business Statistics and Logic

P. Pages : 2

Time : Three Hours



GUG/S/25/16178

Max. Marks : 80

- Notes : 1. Attempt **any five** questions.
2. All questions carry equal marks.

1. State the scope, function and importance of Statistics. **16**
2. Calculate Mean, Median and Mode from the following Information. **16**

Income	Not More Than 10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No. of Person	25	40	60	75	95	125	190	240

3. What do you mean by Regression? Discuss the importance of Regression Analysis. **16**
4. The heights (in Cm.) of a group of fathers and sons are given below: **16**

Height of Father	158	160	163	165	167	170	172	175	177	181
Height of Son	163	158	167	170	160	180	170	175	172	175

5. What are the types & Uses of Index Number? State the problems faced while constructing an Index Number? **16**
6. Find out index Number for 1991 taking 1990 as base year. **16**

Commodities	1990		1991	
	QTY. in Unit	Total Exp.	QTY. in Unit	Total Exp.
A	20	40	15	75
B	4	16	5	40
C	10	10	12	24
D	5	25	6	60

- 1) LasPeyre's Method.
- 2) Paasche's Method.
- 3) Dorbish & Bowley's Method.
- 4) Fisher's ideal Index.

7. Define the probability. Discuss the concept of Event and state the Bayes' Theorem. **16**
8. A Sub-committee of 6 members is to be formed out of a group of 7 men and 4 ladies. Calculate the probability that the sub-committee will consist of. **16**
- 1) Exactly two ladies.
 - 2) At least two ladies
 - 3) Probability of 4 ladies will be selected.

9. An agricultural company wants to decide which commodity should stock to get maximum profit. It was supplied with the following information. The probability that the monsoon will be excess, normal and deficient is 0.40, 0.30 and 0.30. The estimated profit or loss three commodities in respect of these different kinds of monsoon are: **16**

Profit per 1 ton			
Monsoon	Excess	Normal	Deficient
Rice	10,000	-4,000	15,000
Wheat	4,000	-3,000	8,000
Maize	4,000	1,000	-1,000

Determine the optimal decision under each of the following decision criteria and show how you arrived at it.

- 1) Maximax
- 2) Maximin
- 3) Minimax regret (savage criterion)
- 4) Equal likelihood (Laplace)
- 5) Hurwicz Alpha criterion $\alpha = 0.8$
- 6) EMV
- 7) EOL
- 8) EVPI

10. Write short note **any two**.

- A) Methods of Data Collection. **8**
- B) Scope and Use of Correlation. **8**
- C) Components of Time Series. **8**
- D) Laws of Probability. **8**
