Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

MAM - SEMESTER–II • EXAMINATION – SUMMER • 2015

Subject Code: 4120503 **Date: 27-05-2015**

Subject Name: Business Statistics

Time: 10:30 am - 01:30 pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1 **(a)** Write a note on Mean and Median. **07**

(b) Describe the advantages and limitations of Sampling. **07**

Q.2 **(a)** Develop a Regression Equation Y= a + Bx **07**

X	10	14	16	11	13
Y	9	7	5	3	4

(b) Explain following terms**.** **07**

1) Mode 2) Percentile 3) Correlation 4) Sample space 5) Standard Deviation

OR

(b) Explain steps involved in Sampling Process. **07**

Q.3 **(a)** What is the probability that a leap year selected at random will contain 53 Saturdays? **07**

(b) A salesman has a 60% chance of making a sale to each customer. The behavior of successive customers is independent. If two customers A and B are entered, what is the probability that the salesman will make a sale to A or B? **07**

OR

Q.3 **(a)** What do you meant by uniform distribution? Find the Mean and Standard Deviation if values are between 200 and 240. **07**

(b) Explain Baye's Theorem of probability with suitable example. **07**

Q.4 **(a)** Define Primary and Secondary Data. Describe the various methods of collecting Primary data**.** **07**

(b) What are the characteristics of Normal Distribution? **07**

OR

Q.4 **(a)** Find Q3 and Range from the following data. **07**

71	88	100	94	87	65	93	72	83	45	104	91

(b) Compute Expected Value of the outcome. **07**

UNITS	25000	40000	55000	70000
PROBABILITY	0.10	0.30	0.45	0.15

Q.5 **(a)** Use Normal Distribution with Mean 12.5 and Standard Deviation 3.06. **07**

Calculate,

1) P ($x \geq 10$)

2) P ($9 \leq X \leq 14$)

(b) Find the values for 15C3 and 16P5**.** **07**

OR

Q.5 **(a)** The number of Customers arriving at a railway reservation counter on 7 days of a week is 160, 140, 130, 90, 100, 80 and 95 [in "000"]. Find the weekly average number of customers. **07**

(b) Calculate Co-efficient of Variation for Income and Electric Bill**.** **07**

	Income (rs.)	Electric Bill (rs.)
MEAN	42000	2460
STANDARD DEVIATION	1200	120

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