SARDAR PATEL UNIVERSITY
F. Y. B. B. A. (ITM) IInd SEMESTER EXAMINATION
2016
Thursday, 20th October
2.00 p.m. to 4.00 p.m.
UM02EBBI03 - Business Statistics

Total Marks : 60

Q-1 (A) Define Statistics and write the scope and limitations of statistics.   [08]

Q-1 (B) Prepare frequency distribution for the following data in which one of the class is   [07]
24-32.

20, 8, 19, 12, 6, 57, 34, 34, 15, 12, 18, 3, 43, 56, 34, 48, 29,
62, 48, 19, 34, 43, 32, 40, 34, 27, 22, 18, 9, 24.

OR

Q-1 (A) Write the types of data and methods of collecting primary data. Also give the   [08]
difference between primary data and secondary data.

Q-1 (B) Prepare frequency distribution for the following data in which one of the class is   [07]
28-42.

15, 39, 29, 18, 31, 32, 42, 52, 81, 82, 89, 32, 72, 49,
48, 47, 37, 38, 52, 55, 14, 64, 67, 75, 32, 7, 92, 30.

Q-2 (A) From the following frequency distribution find missing frequencies where median is   [08]
25 and total frequencies are 100. Also find mean and mode.

Class	0-10	10-20	20-30	30-40	40-50
F	14	?	26	?	15

Q-2 (B) Define combined mean and find the combined mean of the students of the college   [07]
from the following information.

Year	First Year	Second Year	Third Year
No. of students	250	150	100
Mean	18	19	20

OR

Q-2 (A) Find mean, median and mode of :   [08]

(1) First ten natural numbers

(2) Fir ten even natural numbers.

Q-2 (B) Following information is about the runs of player in different inning, decide which   [07]
player is more consistent, why?

A	12	115	6	73	7	19	119	36	84	29
B	47	12	76	42	4	51	37	48	13	00

Q-3 (A) Write the meaning and types of correlation. [04]

Q-3 (B) Find Karl Perason correlation coefficient for the following data. [05]

X	14	25	27	35	52	54	56	60	77	90
Y	50	56	60	35	58	40	40	35	34	42

Q-3 (C) Find the equations of regression lines from the following data. [06]

X	25	28	30	32	35	36	38	39	42	45
Y	20	26	29	30	25	18	26	35	35	46

OR

Q-3 (A) Define regression and write the properties of regression. [04]

Q-3 (B) Find the regression equation Y on X for following information also estimate Y when [05] X = 100.

X	62	72	98	76	81	56	76	92	88	49
Y	112	124	131	117	132	96	120	136	97	85

Q-3 (C) The result of competition given by three judges is given below, decide which [06] judges have the same approach, why?

Judge A	1	2	5	6	8	9	3	10	7	4
Judge B	5	1	6	4	10	7	2	9	8	3
Judge C	9	8	7	6	2	3	10	1	4	5

Q-4 (A) Write the properties of Binomial and Poisson distribution. [05]

Q-4 (B) The daily profit of a businessman is Rs. 120 and the S.D. of the profit is Rs. 15. [05] Find the probability on which his profit will be less than Rs. 100.

Q-4 (C) The probability that a patient will get reaction of a particular injection is 0.001. [05] 2000 patients are given that injection. Find the probabilities that (1) 2 patients will get reaction (2) 3 patient will get reaction (3) No patient will get reaction. $(e^{-2} = 0.135)$

OR

Q-4 (A) Write the properties of Normal distribution and also write a definition of probability. [05]

Q-4 (B) The probability that a bomb dropped from a plane will hit a target is 2/5. Two [05] bombs are enough to destroy a bridge. If 4 bombs are dropped on a bridge. Find the probabilities that

(1) The bridge will be saved

(2) The bridge will be partially destroyed.

(3) The bridge will be destroyed.

Q-4 (C) On an average 1.5 percent of electric bulbs are found to be defective in a bulb [05] manufacturing factory. Using poisson distribution find the probability of 4 defective bulbs in a box of 200 bulbs. $(e^{-3} = 0.0498)$

All the Best