PARUL UNIVERSITY
FACULTY OF LAW
I- B.B.A. LL.B. Summer 2018 – 19 Examination

Semester: 4   Date: 16/04/2019
Subject Code: 17303281   Time: 10.30 am to 1.00 pm
Subject Name: Business Statistics   Total Marks: 60

Instructions:
1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Do as directed.   (15)

1. Define index number.
2. Newton's Forward interpolation method is used for unequal data points. True /false
3. State one difference between correlation and regression.
4. A circle which is divided into sections or wedges according to the proportion of the data set in each category is called _____
5. What are the three measures of central tendency.
6. In the _____ method the preceeding year is taken as the base year for calculating index number.
7. Name any two types of graphs.
8. Define kurtosis.
9. Write the relation between mean , median and mode.
10 Third moment about the mean measures _____.
11. Mode of the following data 3,4,1,2,3,5,1,2,3,9,3 is,
   a) 3   b) 2
   c) 4   d) 1
12. The index number for the base year is ,
   a) 0   b) 100
   c) 1   d) none of the above
13. The range of coefficient of correlation is
   a) 0 to 1   b) 0 to ∞
   c) $-1\ to\ 1$ d) none of the above
14. Mean for the data 1,3,5,9,2 is ,
   a) 3   b) 20
   c) 5   d) 4
15. The value of p for the data $x = 0,1,2,3,4$ and $y = 2,4,6,8,9$ for $x = 2.1$ in Newton's backward interpolation method, is
   a) -1.9 b) 2.1
   c) 0   d) 2.7

                                                                                      (15)
Q.2 A) Answer the following

1. Costruct an ogive for the following data.

Interval	10-20	20-30	30-40	40-50	50-60
Frequaency	5	7	12	10	6

2. Construct forward interpolation table for the following data.

X	0	1	2	3	4
y	12	16	14	24	28

3. Find the mean of the following data.

x_i	0	1	2	3	4	5
f_i	3	20	15	8	3	1

4. Write any three merits of sampling.

5. For 50 families in a society, the number of children per family were found to be as follows.

3,0,1,2,3,4,5,3,4,5,
2,2,3,1,2,3,4,2,1,3
4,1,1,0,3,2,3,5,1,0
4,2,3,3,2,1,0,3,4
3,2,2,0,1,4,5,3,2,1,1
Prepare a discrete frequency distribution.

Q.3 A) Answer the following. (08)
1.Construct the price index number for 2003, taking the year 2000 as base year

Commodity	Price in the year 2000	Price in the year 2003
A	60	80
B	50	60
C	70	100
D	120	160
E	100	150

2. Prepare simple aggregative price index number from the following data:

Commodity	Rate Unit	Price(1995)	Price(2004)
Wheat	Per 10kg	100	140
Rice	Per 10kg	200	250
Pulses	Per 10kg	250	350
Sugar	Per kg	14	20
Oil	Per litre	40	50

OR

A) Find the Karl Pearson's correlation coefficient of the following data. (08)

x	3	4	6	7	10
y	9	11	14	15	16

(07)

B) Estimate the population of 1995   using the following information by Lagrange interpolation method.

Year	1991	1996	2000
Population((in lakhs)	12	15	20

OR

B) Calculate the standard deviation of the weights of ten persons. (07)

Weights (in kg)	45	49	55	50	41	44	60	58	53	55

Q.4 A) Compute first , second and third moments for the following data. (07)

Class	0-2	2-4	4-6	6-8	8-10
Frequency	5	18	42	27	8

B) Answer the following . (08)
1.Median and mode for 10 observations are respectively 44.4 and 45.5 . Find the mean.
2.Draw the histogram of the following data, 1,1,2,2,2,2,2,3,3,3,3,4,4,5.
3.How many types of data are there, name them by giving example.
4.Write the cumulative frequency for the following data :
3,4,9,6,7,8,9,10.