



# B. P. COLLEGE OF BUSINESS ADMINISTRATION

(A Constituent college of Kadi Sarva Vishwavidyalaya)

MID SEM Examination – September – October 2013

Date: 04/10/13

BBA SEM – III

Total marks: 60

Roll No.....

SUB: Business Statistics – I (BBA 17)

Duration: 3 hrs

## Instructions:

- All questions are compulsory.
- Figures to the right indicate full marks.
- Indicate clearly, the options you attempt along with its respective question number.

### Q: 1

[A] What is 'Primary data'? How many methods for collecting primary data? Also explain any two methods for collecting primary data. (06)

[B] The data of the salary and employees of chemical factory. Use this table and calculate the 85<sup>th</sup> percentile, median and 3<sup>rd</sup> quartile: (06)

Investment (In '000)	Less than 5	5-10	10-25	25-50	50-100	100 or more than 100
No. of Investor	100	500	50	150	200	100

### Q: 2

[A] Give the correct answer from the following options for the each question: (06)

- (1)  $Q_1=95$  &  $Q_3=285$  then  $Q_d=$ \_\_\_\_\_.
- a) 2    b) 190    c) 95    d) 0.5
- (2) Statistics may be called the science of \_\_\_\_\_.
- a) Calculating    b) Classification    c) Compounding    d) Counting
- (3) If  $X_i = 17, 35, 25, 11$  then  $\sum |X_i - \bar{X}| =$ \_\_\_\_\_.
- a) 22    b) 0    c) 8    d) 32
- (4) G.M means
- a) General Mean    b) Geographic Mean    c) Geonetric Mean    d) Geometric Mean
- (5) The highest frequency 85 & lowest frequency 16 then range = \_\_\_\_\_.
- a) 69    b) 101    c) 34.5    d) None of these
- (6) If Mode is not define then use the formula
- a)  $3\bar{x}-2M$     b)  $2M-3\bar{x}$     c)  $3M-2\bar{x}$     d)  $2\bar{x}-3M$

[B] Find the co-efficient of correlation, probable error and limits of the correlation coefficient from the following values: (06)

$$n = 25, \sum X = 50, \sum Y = 40, \sum X^2 = 116, \sum Y^2 = 80, \sum XY = 85.$$

OR

[B] Draw the 'More than and less than cumulative frequency curve' for the following table: (06)

Class	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90
Frequency	200	325	475	550	425	375	220	90

### Q: 3

[A] Find the standard deviation, its coefficient and variance for the following data: (06)

Class	0-20	20-40	40-60	60-80	80-100	100-120	120-140	140-160
Frequency	11	14	13	21	21	17	8	5

[B] Find the rank correlation co-efficient from following data and interpret it: (06)

X	60	72	42	40	45	50	60	51	66
Y	35	30	52	54	48	50	30	35	25

[PTO]

OR

**Q: 3**

[A] Find the mean, median and mode from the following data: (06)

$1/2, 1, 3/4, 0, -1, -3/2, 3/8, 2$

[B] The marks in Marketing & Statistics obtained from a sample inquiry of students from a population of students who appeared at an examination are given below. Calculate the coefficient of correlation and interpret the 'r': (06)

Marks in Marketing	46	50	61	35	40	48
Marks in Statistics	65	70	67	72	82	85

**Q: 4**

[A] Discuss the 'Scatter Diagram method'. (06)

[B] An incomplete frequency distribution is as follows,

Class	10-20	20-30	30-40	40-50	50-60	60-70	70-80	Total
Frequency	12	30	?	65	?	25	18	230

If the median is 46, find the missing frequencies: (06)

OR

**Q: 4**

[A] Calculate the range, its coefficient and mode for following table: (06)

Less than	<2	<4	<6	<8	<10	<12
Frequency	5	16	31	41	48	50

[B] Write a short note on the interpretation of correlation co-efficient. (06)

**Q: 5** Find the correlation co-efficient between price and supply: (12)

Price (X)	Supply (Y)				
	7-8	6-7	5-6	4-5	3-4
9	-	-	-	2	2
11	-	-	3	3	1
13	-	2	6	2	-
15	2	3	2	-	-
17	1	1	-	-	-

OR

**Q: 5**

[A] Calculate the AM, GM & HM from the following data & show  $AM \geq GM \geq HM$ . (08)

320, 43, 417, 3566, 36, 398, 3756

[B] Introduce 'Statistics' with its two definitions. (04)

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**ALL THE BEST**