



Reg. No. : .....

Name : .....

**First Semester B.B.A. Degree Examination, November 2018  
(Career Related First Degree Programme under CBCSS)  
COMPLEMENTARY COURSE  
BM 1131 : Business Statistics  
(2014, 15, 16 Admn.)**

Time : 3 Hours

Max. Marks : 80

**SECTION – A**

I. Answer **all** questions in **one** or **two** sentences. **Each** question carries **1** mark.

- 1) What is statistics ?
- 2) What is primary data ?
- 3) What is tabulation ?
- 4) What is mode ?
- 5) What is positive correlation ?
- 6) What is probability ?
- 7) What is standard deviation ?
- 8) What is permutation ?
- 9) What is random variable ?
- 10) What is Poisson distribution ?

**(10×1=10 Marks)**

**SECTION – B**

II. Answer **any 8** questions. **Each** question carries **2** marks.

- 11) State any two limitations of statistics.
- 12) Give any two functions or uses of an average.

P.T.O.



- 13) Calculate combined mean from the following data :  
The mean mark obtained by 30 boys in a class is 40 and mean marks of 20 girls of the same class is 42. Find the mean of the marks of all the students taken together.
- 14) What do you mean by dispersion ?
- 15) Calculate range and coefficient of range from the following data :  
25, 32, 40, 47, 60, 75, 20, 15.
- 16) What is conditional probability ?
- 17) What do you mean by weighted mean ?
- 18) Find mode from the values given below :  
24, 25, 20, 25, 32, 25, 37, 48, 50, 25.
- 19) Write the equation for mode when median and mean are known.
- 20) What is skewness ?
- 21) State the addition theorem of probability.
- 22) What is mailed questionnaire method ? **(8×2=16 Marks)**

### SECTION – C

III. Answer **any 6** questions. **Each** question carries **4** marks.

- 23) Briefly discuss the functions of statistics.
- 24) Calculate harmonic mean from the following data :
- |                          |    |    |    |    |    |
|--------------------------|----|----|----|----|----|
| <b>Marks :</b>           | 10 | 20 | 25 | 40 | 50 |
| <b>No. of students :</b> | 20 | 30 | 50 | 15 | 5  |
- 25) Discuss addition theorem and multiplication theorem in probability.
- 26) Prepare a frequency distribution from the following table relating to height (in cm) of students :
- 110 108 126 132 149 136 125 112 138 155 125 138 136 130 120 148  
125 119 111 154 147 165 137 143 132 150 137 142 135 125 126 140



- 27) The mean of 200 items was 50. Later on it was discovered that two items were misread As 92 and 8 instead of 192 and 88. Find out correct mean.
- 28) Discuss the steps for ascertaining a distribution is skewed or not ?
- 29) What are the differences between correlation and regression analysis ?
- 30) The ranks given by two judges A and B in a beauty contest are given below. Use rank correlation coefficient to examine the degree of agreement between the judgements of the two judges A and B.

**Judge A :** 1 2 3 4 5 6 7 8 9 10 11 12

**Judge B :** 12 9 6 10 3 5 4 7 8 2 11 1

- 31) A husband and wife appear in an interview for two vacancies in the same post. The probability of husband's selection is  $\frac{1}{7}$  and that of wife's selection is  $\frac{1}{5}$ . What is the probability that (a) both of them will be selected. (b) none of them will be selected. **(6×4=24 Marks)**

**SECTION – D**

IV. Answer **any 2** questions. **Each** question carries **15** marks.

- 32) Briefly discuss Poisson, binomial and normal distribution.
- 33) a) What are the merits and demerits of median ?  
b) Compute median from the following data :

Value	Frequency
Less than 10	4
" " 20	16
" " 30	40
" " 40	76
" " 50	96
" " 60	112
" " 70	120
" " 80	125



34) Calculate Pearsonian coefficient of correlation for the following data :

X	9	8	7	6	5	4	3	2	1
Y	15	16	14	13	11	12	10	8	9

- 35) i) In a competitive test administered to 1000 students the average score was 42 and standard deviation 24. Find (a) the number of students exceeding a score 50. (b) the number of students lying between 30 and 54.
- ii) The probability that a contractor will get a plumbing contract is  $\frac{2}{3}$  and the probability that he will not get an electric contract is  $\frac{5}{9}$ . If the probability of getting at least one contract is  $\frac{4}{5}$ , what is the probability that he will get both the contracts ?

**(2×15=30 Marks)**

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