



(Pages : 3)

32314

B – 3231

Reg. No. :

Name :

First Semester B.B.A. Degree Examination, December 2016
Career Related First Degree Programme under CBCSS
Group – 2 (b)
Complementary Course
BM – 1131 : BUSINESS STATISTICS
(2014 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A

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

- 1) What do you mean by statistics in plural sense ?
- 2) List the limitations of statistics.
- 3) Define secondary data.
- 4) What is tabulation ?
- 5) Calculate mode from the following data :
25, 36, 25, 33, 34, 25, 33.
- 6) What is Range ?
- 7) Define Regression.
- 8) Correlation coefficient + 0.8; N = 100. Find out probable error.
- 9) $r = 0.66$, $\sigma_y = 8$, $\sigma_x = 11$ Find b_{yx} .
- 10) What is a mutually exclusive event ?

(1×10=10 Marks)

SECTION – B

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

- 11) Mention two functions of statistics.
- 12) Define statistics in singular sense.

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- 13) Name the objectives of classification.
- 14) What is a Pie diagram ?
- 15) Mean 27 median 29. Find mode.
- 16) Calculate-Harmonic mean :
- X** : 2, 3, 4, 5
- 17) What do you mean by concurrent deviations ?
- 18) $n = 5$; $\sum xy = 114$; $\sum x = 23$; $\sum y = 20$; $\sum y^2 = 110$. Calculate the regression co-efficient b_{xy} .
- 19) How are the regression lines constructed ?
- 20) From a bag containing 7 white, 8 black and 5 red balls, a ball is drawn. What is the probability that it is white ?
- 21) A and B are two mutually exclusive events. $P(A) = .45$ $P(B) = .35$. Find $P(A \text{ or } B)$.
- 22) What is a random variable ? **(2×8=16 Marks)**

SECTION – C

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

- 23) Discuss briefly the use of statistics in the field of business.
- 24) What precautions would you take in choosing secondary data ?
- 25) A sample size of 22 items has a mean of 15 and another sample of size 18 items has a mean of 20. Find the mean of the combined sample.
- 26) Calculate Geometric mean :
- | | | | | | |
|----------------------|-----|-----|-----|-----|-----|
| Price Index : | 150 | 260 | 350 | 250 | 175 |
| Weights : | 10 | 6 | 4 | 2 | 3 |
- 27) Find out standard deviation of daily output from the following :
- | | | | | | | | |
|------------------------------|---|---|---|----|----|----|----|
| No. of articles (x) : | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| No. of workers (f) : | 3 | 6 | 9 | 13 | 8 | 5 | 4 |
- 28) Income : Rs. 480, 650, 370, 380, 250, 200, 800 calculate quartile deviation.



29) Determine co-efficient of correlation from X and Y by taking deviations from actual means.

X :	2	3	4	5	6	7	8
Y :	4	5	6	8	9	7	10

30) Explain the main applications of Regression analysis.

31) Four coins are tossed simultaneously. What is the probability of getting 2 heads? **(4×6=24 Marks)**

SECTION – D

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

32) Elucidate the relationships that exist between statistics and the following :

- a) Economics
- b) Business management
- c) Industrial management
- d) Research
- e) Administration.

33) Calculate arithmetic mean from the following :

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

34) Define correlation. Explain the important methods of studying correlation.

35) The probability that machine A will be performing a usual function in 5 years time is $\frac{1}{4}$ while the probability that machine B will still be operating usefully at the end of the same period is $\frac{1}{3}$. Find the probability that in five years time.

- a) both machines will be performing a usual function.
- b) neither will be operating
- c) only machine B will be operating.
- d) at least one of the machines will be operating.

(15×2=30 Marks)