

BACHELOR OF BUSINESS**ADMINISTRATION (SERVICES****MANAGEMENT) (BBASM)****Term-End Examination****December, 2024****BSM-008 : BASIC QUANTITATIVE TECHNIQUES***Time : 2 Hours Maximum Marks : 50**Note : All questions are compulsory.*

1. Answer all the questions. Each question carries

1 mark :

10×1=10

(a) Statistics does not study characteristics.

(b) Any phenomenon which is not measurable is called as an

(c) The sum of pie chart is 270°. (True/False)

(d) The median of the numbers 94, 33, 86, 68, 32, 80, 48, 70 is :

(i) 58 units

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(ii) 63 units

(iii) 72 units

(iv) 69 units

(e) The S.D. of 7, 7, 7, 7, 7 is :

(i) 0

(ii) 7

(iii) 14

(iv) 5

(f) When a coin is tossed, what is the probability of getting a tail ?

(i) $\frac{1}{2}$ (ii) $\frac{1}{4}$

(iii) 0

(iv) 1

(g) To use the *t*-distribution, the sample should be

(h) A sum of money will yield a simple interest of ₹ 7,200 in four years at 12% p.a. The sum is

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- (i) At break-even point, there is no profit no loss to the firm. (True/False)
- (j) Data collected by questionnaire are :
- (i) Primary data
 - (ii) Secondary data
 - (iii) Published data
 - (iv) Grouped data

2. Answer any *five* of the following questions in about **100** words each. Each question carries 2 marks : $2 \times 5 = 10$

- (a) What are the sources of secondary data ?
- (b) What are the different types of tabulation ?
- (c) Define median.
- (d) What do you understand by dispersion ?
- (e) What do you mean by mutually exclusive events ?
- (f) What is degrees of freedom ?
- (g) What is compound interest ?
- (h) What is Delphi method of demand forecasting ?

3. Answer any *four* of the following questions in about **250** words each. Each question carries 5 marks : $5 \times 4 = 20$

- (a) Find the harmonic mean of 3, 6, 12 and 14.
- (b) Discuss the applications of Chi-square distribution.
- (c) You have taken a loan of ₹ 7,000 from a bank at 10% as rate of interest. Find the interest you have to pay at the end of one year to the bank.
- (d) What is break-even analysis ? Discuss the role of break-even analysis in managerial decision-making.
- (e) Differentiate between primary and secondary data.
- (f) What are the advantages and limitations of diagrammatic presentation of data ? Discuss.

4. Answer any *one* question in **500** words :

10×1=10

- (a) Construct a histogram from the following distribution of total marks in Statistics obtained by 65 students in BBA programme semester-I examination :

Marks (mid-values)	No. of Students
150	8
160	10
170	25
180	12
190	7
200	3

- (b) Calculate the Arithmetic Mean (AM) from the following data by Step-Deviation

Method :

Wages (x)	10	15	20	25	30	35	40
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