

**BACHELOR OF BUSINESS  
ADMINISTRATION (SERVICES  
MANAGEMENT) (BBASM)**

**Term-End Examination**

**December, 2023**

**BSM-008 : BASIC QUANTITATIVE TECHNIQUES**

*Time : 2 Hours*

*Maximum Marks : 50*

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**Note :** *Answer all questions. All questions carry equal marks.*

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1. Answer all the questions. Each question carries 1 mark. 1×10=10
  - (a) State True or False : Statistics can be applied to heterogeneous data.
  - (b) When an investigator uses the data which have already been collected by others, such data are called :
    - (i) Secondary data
    - (ii) Primary data
    - (iii) Collected data
    - (iv) Processed data

- (c) The proportion of data indicated by the number of degrees in each section of 360 is a :
- (i) Circle
  - (ii) Graph
  - (iii) Pie diagram
  - (iv) Frequency curve
- (d) The mode of the numbers 4, 3, 2, 5, 3, 4, 5, 3, 7, 3, 2, 6 is :
- (i) 4 units
  - (ii) 5 units
  - (iii) 3 units
  - (iv) 2 units
- (e) The S.D. of 1, 2, 3, 4, ..., 10 is :
- (i) 1.9 units
  - (ii) 2.9 units
  - (iii) 2.6 units
  - (iv) 2.7 units
- (f) Three unbiased coins are tossed; what is the probability of getting at least two heads ?
- (i)  $\frac{1}{3}$
  - (ii)  $\frac{1}{6}$
  - (iii)  $\frac{1}{2}$
  - (iv)  $\frac{1}{8}$

- (g) The name F-test was given by :
- (i) George W. Snedecor
  - (ii) Ronald A. Fisher
  - (iii) Raymond Vernon
  - (iv) Hicks
- (h) State True or False : Compound interest is more than simple interest.
- (i) State True or False : Demand forecasting is convenient for capital goods.
- (j) In the case of the questionnaire method of gathering data, it should be made certain that all the questions have been :
- (i) Read
  - (ii) Interpreted
  - (iii) Answered
  - (iv) Left
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 steps for constructing a pie chart ?
  - (b) What are the characteristics of normal distribution ?
  - (c) What do you understand by the time value of money ?

- (d) What do you mean by break-even analysis ?
  - (e) Define variables and attributes.
  - (f) Define the Delphi method in forecasting.
  - (g) What are the sources of secondary data ?
  - (h) What is Conditional Probability ?
3. Answer any *four* of the following questions in about **250** words each. Each question carries 5 marks : 5×4=20
- (a) Five equally capable students are waiting for a summer interview with a company that has announced that it will hire only one of the five by random drawing. The group consisted of Sathvik, Rithvik, Abhi, Uday and Pavan. What is the probability that either Sathvik or Rithvik will be the candidate ?
  - (b) Discuss the properties of the F-distribution.
  - (c) What do you mean by interest on interest ? Is it the same as compound interest ?
  - (d) What are the types of qualitative methods of demand forecasting ?
  - (e) What are the desirable characteristics of measures of dispersion ?

- (f) Calculate the range and its coefficient from the data given below :

150,180, 240, 300, 245, 255, 270, 210, 225

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

10×1=10

- (a) What do you mean by statistics ? Discuss the significant role of statistics related to planning, economics, business, industry, management, mathematics, psychology, and education.
- (b) Calculate the Arithmetic Mean (AM) from the following data by Step-Deviation Method :

<b>Wages (x)</b>	10	15	20	25	30	35	40
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