



Avinashilingam Institute for Home Science and Higher Education for Women

Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD (now MoE)

Re-accredited with A++ Grade by NAAC. CGPA 3.65/4, Category I by UGC

Coimbatore - 641 043, Tamil Nadu, India

Master's Degree Examination – May 2025

II Semester

Class : I P.G.
Major : Tourism Management

Time: 3 Hours
Max. Marks: 100

24MTAC12 Business Statistics

Course Outcomes:

CO1: Solve arrange of problem techniques covered in their respective field of operation

CO2: Understand the key terminology, concepts tools and technique in business statistical analysis.

CO3: Apply technology to statistical analysis and problem solving.

CO4: Analyze discrete and continuous probability distributorstovariousbusinessapplications.

CO5: Interpret the relevance of statistical findings for business decision making.

Part A
Choose the Correct Answer

10 x 1 = 10

1. In a web-based survey, customers are asked to rate your company's product on the following scale: Excellent, Good, Average and Poor. CO1K3
a. Continuous b. Ordinal c. Nominal d. None of the above
2. Which partition value divides the series into two equal parts? CO2K4
a. 10 b. 5 c. 50 d. 90
3. The scatter in a series of values about the average is called: CO1K4
a. Central tendency b. Dispersion c. Skewness d. Summery
4. If the observations of a variable X are, -4, -20, -30, -44 and -36, then the value of the range will be: CO2K4
a. -48 b. 40 c. -40 d. 48
5. Calculate the median of the following set of data: CO1K2
123,243,322,492,537,599,620,798,812,954
a. 537 b. 550 c. 568 d. 599
6. The cumulative frequency for a particular class is equal to 35. The cumulative frequency for the next class will be. CO2K4
a. equal to 65 b. 35 minus the next class frequency
c. less than 35 d. 35 plus the next class frequency
7. The probability distribution for CO1K4
x : 8 12 16 20 24
p(x) : 1/8 1/6 3/8 1/4 1/12
The variance of the random variable x is
a. 20 b. 21 c. 22 d. 23
8. In a random throw of n dice, the expectation of the sum of points on them is CO2K3
a. n/2 b. 3n/2 c. 7n/2 d. 9n/2

9. How many types are used for the calculation of index numbers: CO1K2
 a. 2 b. 3 c. 4 d. 5

10. A time series is unable to adjust the influences like: CO3K4
 a. customs and policy changes b. seasonal changes
 c. long-term influences d. none of the above

Part B

5 x 6 = 30

Answer ALL questions

Each answer should not exceed 400 words or two pages

11 a. Outline the need, types and sources of data. CO1K2
 (or)

11 b. Narrate the classifications of business statistics. CO3K3

12 a. Explain the classification of data and the basis for classification. CO3K2
 (or)

12 b. Where does data classification fit in the data lifecycle and Elucidate the methods of data classification. CO1K4

13 a. Define the Properties of a good measure of central tendency. CO3K1
 (or)

13 b. Find the Variance and Standard Deviation of the Following Numbers: CO2K4
 3, 5, 6, 10, 9, 10, 1, 3

14 a. 10% of the bulbs produced in a factory are of red colour and 2% are red and defective. If one bulb is picked up at random, determine the probability of its being defective if it is red. CO1K3
 (or)

14 b. If we toss a coin 20 times and getting head is the success then what is the Binomial Distribution standard deviation? CO1K4

15.a. Calculate Price Index Number for 2016 from the following data by simple aggregate method, taking 2016 as base year. CO2K2

Commodities	Price per kg	
	2015	2016
Apple	100	140
Orange	30	40
Pomegranate	120	130
Guava	40	50

(or)

15 b. "The Relation between Inflation and Index Numbers" – Explain. CO2K3

Part C

5 x 12 = 60

Answer ALL questions

Each answer should not exceed 800 words or four pages

16 a. "Functions and Limitations business statistics"- Explain. CO2K1
 (or)

16 b. "Statistics is a subject which can be applied by the individuals as well as the different types of Organizations in making their decisions" Comment. CO1K4

- 17 a. i. Why is Bivariate Frequency Distribution Significant in Business Research?(6 Marks) CO2K4
ii. How to Calculate Bivariate Frequency Distribution? (6 Marks) CO3K1

(or)

- 17 b. Represent the following information in a suitable tabular form with proper rulings and headings: CO3K2

The annual report of the Ishapore Public Library reveals the following points regarding the reading habits of its members.

Out of the total 3, 713 books issued to the members in the month of June 2024, 2, 100 were fictions. There were 467 members of the library during the period and they were classified into five classes A, B, C, D, and E. The number of members belonging to the first four classes were respectively 15, 176, 98 and 129; and the number of fictions issued to them were 103, 1, 187, 647, and 58 respectively. Number of books, other than text books and fictions, issued to these four classes of members were respectively 4, 390, 217 and 341. The textbooks were issued only to members belonging to the classes C, D and E and the number of textbooks issued to them were respectively 3, 317 and 160.

During the same period, 1, 246 periodicals were issued. These included 396 technical journals of which 36 were issued to members of class B, 45 to class D and 315 to class E.

To members of the classes B, C, D and E the number of other journals issued were 419, 26, 231 and 99 respectively.

The report, however, showed an increase by 3.9% in the number of books issued over last month, though there was a corresponding decrease by 6.1% in the number of periodicals and journals issued to members.

- 18 a. P and Q have an average monthly salary of Rs. 5050. Q and R have an average monthly income of Rs. 6250, while P and R have an average monthly income of Rs. 5200. Find the monthly salary of P. CO4K1

(or)

- 18 b. The weekly sales of two products A and B were recorded as follow: CO2K3

Product A : 59 75 27 63 27 28 56

Product B: 150 200 125 310 330 250 225

Find out which of the two products shows greater fluctuation in sales.

- 19 a. Explain the Major types of Probability Distributions. CO2K3

(or)

- 19 b. For some laptops, the time between charging the laptop battery is normally distributed with a mean of 50 hours and a standard deviation of 15 hours. Rajesh owns one of these laptops and wants to know the probability that the time period will be between 50 and 70 hours. CO4K3

- 20 a. Write the Features, Advantages and Limitations of Index Number. CO2K3

(or)

- 20 b. Describe the various Methods for time series analysis. CO3K3
