|  |  |  |  |  |  |  |  |  |  |  |  |
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PRESIDENCY UNIVERSITY BENGALURU

**SET-B**

SCHOOL OF MANAGEMENT

**END TERM EXAMINATION – MAY/JUNE 2024**

**Semester :** Semester II - 2023

**Course Code :** BSE1030

**Course Name :** Introduction to Statistics

**Program :** BBA

**Date :** June 13, 2024

**Time :** 9.30AM – 12.30PM

# Max Marks : 100

**Weightage :** 50%

# Instructions:

1. *Read all questions carefully and answer accordingly.*
2. *Question paper consists of 3 parts.*
3. *Scientific and non-programmable calculator are permitted.*
4. *Do not write any information on the question paper other than Roll Number.*

**PART - A**

**ANSWER ANY 5 QUESTIONS 5 X 2 = 10M**

1. Describe the various types of data.

(CO1) [Knowledge]

1. Calculate Arithmetic mean from the following data: 25, 30, 24, 22, 35, 21, 20, 26, 23, 32, 37.

(CO2) [Knowledge]

1. Discuss the formulas of:
   1. Inter Quartile Range (IQR)
   2. Quartile Deviation (Q.D.)
   3. Coefficient of Quartile Deviation
2. Outline the different sources of secondary data.
3. Calculate the Median from the following data: 20, 11, 25, 30, 23, 25, 39, 42.
4. Explain the term classification of data in Statistics.

(CO3) [Knowledge]

(CO1) [Knowledge]

(CO2) [Knowledge]

(CO1) [Knowledge]

1. Explain the relationship between skewness and the measures of central tendency (mean, median, and mode) for a distribution.

(CO2) [Knowledge]

**PART - B**

**ANSWER ANY 5 QUESTIONS 5 X 10 = 50M**

1. Following are the scores of the three players. Find out range and coefficient of range for the three series. Which of these players has the most consistent batting?

**Match**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | | **Dhoni** |  |
| I | 32 | 10 | 42 |  |
| II | 25 | 60 | 38 |  |
| III | 43 | 0 | 40 |  |
| IV | 55 | 30 | 39 |  |
| V | 45 | 100 | 41 | (CO3) [Comprehension] |

**Virat Kohli**

**Yuvraj Singh**

**Mahendra Singh**

1. Find arithmetic mean from the data given below :

Class Interval Frequency 0-10 12

10-20 18

20-30 27

30-40 20

40-50 17

50-60 6

(CO4) [Comprehension]

The frequency distribution of marks obtained by 60 students of a class in a college is given below: Plot Ogive (less than and more than).

|  |  |
| --- | --- |
| **Marks** | **Frequency** |
| 10-20 | 3 |
| 20-30 | 5 |
| 30-40 | 12 |
| 40-50 | 18 |
| 50-60 | 14 |
| 60-70 | 6 |
| 70-80 | 2 |

(CO2) [Comprehension]

1. The following data relates to the monthly expenditure (in ₹) of two-family A & B. Represent it by sub- divided bar diagram.

**Items of**

**Family A**

**Family B**

**expenditure expenditure expenditure**

|  |  |  |
| --- | --- | --- |
| Food | 160 | 120 |
| Clothing | 80 | 32 |
| Rent | 60 | 48 |
| Light & Fuel | 20 | 16 |
| Miscellaneous | 80 | 24 |
| **Total** | **400** | **240** |

(CO1) [Comprehension]

1. Find out the Mean Deviation and coefficient of M.D. from the following data:

|  |  |  |
| --- | --- | --- |
| X | F |  |
| 4 | 2 |  |
| 6 | 4 |  |
| 8 | 5 |  |
| 10 | 3 |  |
| 12 | 2 |  |
| 14 | 1 |  |
| 16 | 4 |  |
|  |  | (CO3) [Comprehension] |

1. Represent the following data by a percentage sub-divided bar diagram.

**Items of**

**Family A**

**Family B**

|  |  |  |  |
| --- | --- | --- | --- |
| **expenditure** | **Incomec₹500** | **Incomec₹300** |  |
| Food | 150 | 150 |  |
| Clothing | 125 | 60 |  |
| Rent | 25 | 50 |  |
| Light & Fuel | 190 | 70 |  |
| Miscellaneous | +10 | -30 |  |
|  |  |  | (CO1) [Comprehension] |

1. 1. Estimate the Mean of the following data set.

CI 10-19 20-29 30-39 40-49 50-59 60-69 70-79 80-89 90-99

Frequency 22 38 45 49 55 56 20 10 5

(CO2) [Comprehension]

**PART - C**

**ANSWER ANY 2 QUESTIONS 2 X 20 = 40M**

1. Find out the coefficient of correlation between X and Y Using Karl Pearson.

|  |  |
| --- | --- |
| **X** | **Y** |
| 5 | 2 |
| 10 | 4 |
| 15 | 7 |
| 20 | 9 |
| 25 | 8 |
| 30 | 10 |
| 35 | 9 |

(CO5) [Application]

1. Given the following values of X & Y; Find the equation of regression of (i) Y on X; (ii) X on Y.

|  |  |  |
| --- | --- | --- |
| X | Y |  |
| 6 | 9 |  |
| 2 | 11 |  |
| 10 | 5 |  |
| 4 | 8 |  |
| 8 | 7 |  |
|  |  | (CO5) [Application] |

1. Calculate the Standard Deviation, Variation, Coefficient of Variation (CV) from the following data:

|  |  |
| --- | --- |
| X | F |
| 0-10 | 2 |
| 10-20 | 4 |
| 20-30 | 5 |
| 30-40 | 4 |
| 40-50 | 2 |

(CO4) [Application]