



**ST. JOSEPH’S UNIVERSITY, BANGALORE-27**

**BBA/BBASF – II SEMESTER**

**SEMESTER EXAMINATION: April 2023**

**(Examination Conducted in May 2023)**

**BA2121/BASF2121: QUANTITATIVE METHODS FOR BUSINESS DECISIONS**

**(For Current batch students only)**

Time- 2 hrs Max Marks-60

**This paper contains 2 printed pages and four parts**

**PART - A**

**I.** Answer ***any five*** of the following (**5x2 = 10 Marks)**

1. Mention the types of Correlation.
2. Share Rs.1000 among XYZ in the ratio 1:2:3
3. Calculate the Arithmetic mean of the weight of 10 students in a class.

| **Sl.No.** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Weight (in Kg)** | 42 | 56 | 49 | 50 | 49 | 53 | 52 | 48 | 47 | 54 |

1. What is a Scatter Diagram?
2. Calculate median from the following data:

| **Wages (Rs.)** | 25 | 50 | 35 | 45 | 20 | 55 | 30 | 40 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No. of Workers** | 7 | 9 | 12 | 15 | 10 | 20 | 12 | 25 |

1. Give the meaning of Geometric Mean**.**

**PART - B**

**II.** Answer ***any four*** of the following (**4x5 = 20 Marks)**

1. The details of the average marks scored by a student in five different subjects are given as:

| **Subjects** | **Marks** | **Weights** |
| --- | --- | --- |
| English | 85 | 1 |
| Mathematics | 90 | 5 |
| Tamil | 70 | 2 |
| Science | 60 | 4 |
| Social science | 55 | 3 |

Calculate the Weighted arithmetic Mean.

1. Calculate the amount and compound interest on Rs.1,000 for 15 years at 12% p.a.
2. Compute the co-efficient of correlation from the following data:

| X | 36 | 42 | 59 | 45 | 47 | 44 | 49 | 57 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Y | 49 | 53 | 72 | 80 | 21 | 29 | 39 | 30 |

1. What is meant by Classification? Explain the methods of Classification.
2. Calculate Standard deviation from the following data: 39,46,52,75,82,93,97

**PART - C**

**III.** Answer ***any two*** of the following (**2x10 = 20 Marks)**

1. Explain the methods of collecting Primary data.
2. Calculate mode from the data given below using Grouping Table.

| Marks | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No. of Students | 3 | 2 | 1 | 15 | 14 | 8 | 9 | 12 |

1. Calculate the co-efficient of rank correlation of 10 students in two subjects.

| Statistics | 3 | 5 | 8 | 4 | 7 | 10 | 2 | 1 | 6 | 9 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Economics | 6 | 4 | 9 | 8 | 1 | 2 | 3 | 10 | 5 | 7 |

**PART - D**

**IV. Answer the following (1x10=10 Marks)**

1. Fit two regression equations, X on Y and Y on X from the following data.

| X | 25 | 30 | 35 | 40 | 45 | 50 | 55 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Y | 18 | 24 | 30 | 36 | 42 | 48 | 54 |