

Registration Number:

Date & session:

**ST JOSEPH’S UNIVERSITY, BENGALURU -27**

**BBA/BBASF – 2nd SEMESTER**

**SEMESTER EXAMINATION: APRIL 2024**

**(Examination conducted in May / June 2024)**

**BA 2123/BASF2123: QUANTITATIVE METHODS FOR BUSINESS DECISIONS**

**(For current batch students only)**

Time: 2 hours 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. Define Skewness.
2. Give the meaning of Chi Square.
3. Tom invests ₹2000 in a mutual fund that pays a nominal interest rate of 8%, compounded annually. How much money will he have after 5 years?
4. Identify the mode from the following data:

365,195,283,234,175,151,310,208,175,410,638,194,512,234,600, 122, 234, 638, 410, 512, 270, 900,175

1. Calculate A.M under direct method for 20, 25,14,72,18,16,11,19.
2. A father is 28 years older than his son. In five years, the father’s age will be seven more than twice the age of his son. Find their present ages.

**PART-B**

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

1. 10 students of BBA class scored the following marks in QMBD out of

100. Calculate S.D and co-efficient of variance.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5 | 10 | 20 | 25 | 40 | 42 | 45 | 48 | 70 | 80 |

1. Find Median from the following data.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| C.I | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 |
| f | 6 | 10 | 25 | 30 | 20 | 10 |

1. If 18 water pumps can pump 2,150 tones of water in 10 days for 7 hours. In how many days will 16 water pumps, pump 1,634 tones of water for 9 hours.
2. Calculate Quartile Deviation and its co-efficient.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| C.I | 4-8 | 8-12 | 12-16 | 16-20 | 20-24 | 24-28 | 28-32 | 32-36 | 36-40 |
| f | 6 | 10 | 18 | 30 | 15 | 12 | 10 | 6 | 2 |

1. What is meant by data? Explain its relevance in business decisions.

**PART-C**

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

1. Explain the scope and limitations of statistics.
2. Find the mode from the following data under grouping method:

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| X | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| f | 10 | 16 | 18 | 13 | 6 | 3 | 8 | 4 | 6 | 6 |

1. From the following data obtain regression Equation X on Y, also predict X if Y is 10.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| X | 3 | 6 | 9 | 10 | 7 |
| f | 11 | 8 | 7 | 6 | 8 |

**PART-D**

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

15. Calculate spearman’s rank correlation from the following:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| X | 59 | 53 | 98 | 81 | 95 | 75 | 61 | 55 |
| Y | 47 | 37 | 25 | 39 | 45 | 30 | 32 | 40 |