

Register Number:

DATE:

**ST. JOSEPH’S COLLEGE (AUTONOMOUS), BENGALURU-27**

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| **BBA SF – II SEMESTER** |
| **SEMESTER EXAMINATION: APRIL 2020** |
| **BBA SF 2219 – QUANTITATIVE TECHNIQUES - II**  |

**Time: 2 ½ Hours Max Marks: 70**

**Section-A**

I. Answer any **FIVE** questions. Each question carries **2 marks**. (5x2=10)

1. Define Business statistics.
2. Differentiate between primary and secondary data.
3. Give the meaning of Index numbers.
4. The number of students from three sections was 70, 65 and 60. The average marks scored are 66, 68 and 78.9 respectively. Find the average marks of all the students.
5. Find Q1 & Q3: 15, 21, 23, 12, 14, 25, 40, 32, and 28.
6. Mention the advantages of time series.

**Section- B**

II. Answer any **THREE** questions. Each question carries **5 marks**. (3x5=15)

7. Briefly explain the scope of business statistics.

8. Compute Q2:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **X “Less than”** | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 |
| **f** | 29 | 224 | 465 | 582 | 634 | 644 | 650 | 656 | 660 |

9. Find the missing frequency where average is 0.84

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **X** | -21 | -14 | -7 | 0 | 7 | 14 | 21 |
| **F** | 2 | ? | 19 | 29 | 20 | 13 | 5 |

10. Compute fisher’s index number from the following data and test TRT.

|  |  |  |
| --- | --- | --- |
| **Commodity** | **2019** | **2020** |
|  | **Price** | **Quantity** | **Price** | **Quantity** |
| **A** | 5 | 6 | 6 | 7 |
| **B** | 7 | 12 | 6 | 13 |
| **C** | 6 | 15 | 8 | 15 |
| **D** | 8 | 10 | 8 | 12 |

**Section- C**

III. Answer any **TWO** questions. Each question carries **15 marks**. (2x15=30)

11. i) Briefly explain the functions of statistics. (5 marks)

 ii) BBA SF students obtained the following marks in Statistics and Accountancy. Calculate Rank Correlation. (10 marks)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Statistics** | 81 | 90 | 21 | 87 | 98 | 80 | 98 | 90 | 98 | 70 |
| **Accounts** | 75 | 73 | 85 | 70 | 76 | 82 | 65 | 76 | 68 | 80 |

 12. i) The following is the table showing the scores of two batsmen, Rin and Bin. Find out who is a better scorer and who is more consistent. (10 marks)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Rin** | 103 | 85 | 8 | 50 | 0 | 17 | 28 | 142 | 35 | 49 |
| **Bin** | 47 | 79 | 9 | 105 | 111 | 51 | 67 | 78 | 4 | 28 |

 ii) Find mean by step deviation method. (5 marks)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Marks** | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 |
| **Students** | 5 | 8 | 15 | 20 | 12 | 6 | 4 |

 13. Given below are the figures of demand for a commodity.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| **Demand** | 73 | 85 | 74 | 75 | 80 | 52 | 58 |

1. Fit a straight line by least square method.
2. Show the actual and trend line on a graph sheet.
3. Estimate the demand for 2021 & 2022.

**Section – D**

IV. Answer the following **COMPULSORY** question carrying **15 marks**. (1x15=15)

14. Compute modal value using grouping and analysis table.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Wages** | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 | 70-80 |
| **No of workers** | 6 | 42 | 40 | 26 | 8 | 6 | 10 | 4 |