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| **ST. JOSEPH’S COLLEGE (AUTONOMOUS), BANGALORE-27** |
| **BBA STRATEGIC FINANCE - II SEMESTER** |
| **SEMESTER EXAMINATION: APRIL 2020** |
| **BBASF2219 – QUANTITATIVE TECHNIQUES - II** |
|  |  |  |  |  |  |  |
| **Time- 2 1/2 hrs** |  | **Max Marks-70** |  |
|  |  |  |  |  |  |  |
| **This paper contains two printed pages and four parts** |

**Section A**

1. Answer any **five** from the following. Each question carries two marks. **2X5=10**
2. Give the interpolation formula for Mode under continuous series.
3. State any two uses of index numbers.
4. From the following date calculate Q3:

3,7,12,15,25,37,48,52,69,70,73,80,88,92.

1. What is weighted average mean? Write the formula.
2. Mention the components of time series.
3. State any four merits of statistics.

**Section B**

1. Answer any **three** from the following. Each question carries five marks. **5X3=15**
2. Explain the limitations of Statistics.
3. Find the missing frequency from the following data if mean is 67.45

|  |  |  |  |  |  |  |
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| **Heights (inches)** | 60-62 | 63-65 | 66-68 | 69-71 | 72-74 | **Total** |
| **No. of students** | 5 | 18 | - | - | 8 | **100** |

1. Find regression equation of X on Y from the given data:

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **X** | 25 | 28 | 30 | 32 | 35 | 36 | 38 | 39 | 42 | 55 |
| **Y** | 20 | 26 | 29 | 30 | 25 | 18 | 26 | 35 | 35 | 46 |

1. Find mean by step deviation method.

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

**Section C**

1. Answer any **two** from the following. Each question carries fifteen marks. **15X2=30**
2. a) Explain the scope of statistics.

b) Calculate mode using empirical formula from the following data:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **X** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **F** | 2 | 15 | 23 | 16 | 14 | 10 | 9 | 7 | 4 |

 **(5+10)**

1. Following are the runs scored by the two batsmen named NIKO and DIKO in ten innings. Find who is a better scorer and who is more consistent.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **NIKO** | 101 | 22 | 0 | 36 | 82 | 45 | 7 | 12 | 65 | 14 |
| **DIKO** | 97 | 12 | 40 | 96 | 13 | 8 | 85 | 8 | 56 | 16 |

1. Construct the fisher’s Index Number from the following data and show how it satisfies the Time Reversal Test and Factor reversal Test.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Commodities** | **A** | **B** | **C** | **D** |
| **2015- Price** | 15 | 12 | 60 | 20 |
| **2015- Quantity** | 2.5 | 1 | 0.2 | 0.1 |
| **2020- Price** | 30 | 20 | 100 | 30 |
| **2020- Quantity** | 3 | 1.2 | 0.3 | 0.2 |

**Section D**

1. **Compulsory question:**  **15X1=15**
2. Below are the gives figures of production of textiles industry. Fit a straight line trend by the method of least squares and show the value on graph.

Estimate the production for 2021, 2022, 2023 and 2024

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| **Production in tons** | 12 | 10 | 14 | 11 | 13 | 15 | 16 |

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