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| **ST. JOSEPH’S COLLEGE (AUTONOMOUS), BANGALORE-27** |
| **B.Com – II SEMESTER** |
| **SEMESTER EXAMINATION: APRIL 2019** |
| **BC2418/BPS 2418 – Quantitative Analysis For Business Decisions**  |
|  |  |  |  |  |  |  |
| **Time- 2 1/2 hrs** |  | **Max Marks-70** |  |

**Section-A**

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

1. Define business statistics.
2. Give the meaning of primary and secondary data.
3. Mention the limitations of statistics.
4. What are the requisites of a good average?
5. The AM age of the first batch of 80 boys is 10 years old and that of second batch of 20 girls is 15 years old find AM of both.
6. Find median:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| P | Q | R | S | T | U | V |
| 60 | 45 | 55 | 50 | 40 | 70 | 65 |

**Section- B**

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

1. Briefly explain the different methods of primary data collection.
2. A candidate obtained the following marks in his PUC examination. English - 60, Hindi – 50, Physics – 80, Chemistry – 70, Maths – 90, Electronics – 70. Weights for different subjects are 1, 1, 3, 3, 3, and 2. Find the weighted mean.
3. Find the SD.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S.NO.** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **Marks** | 8 | 9 | 15 | 23 | 5 | 11 | 19 | 8 | 10 | 12 |

1. Compute fisher’s index number from the following data.

|  |  |  |
| --- | --- | --- |
| **Commodity** | **2017** | **2018** |
|  | **Price** | **Quantity** | **Price** | **Quantity** |
| **A** | 6 | 50 | 10 | 56 |
| **B** | 2 | 100 | 2 | 120 |
| **C** | 4 | 60 | 6 | 60 |
| **D** | 10 | 30 | 12 | 24 |
| **E** | 8 | 40 | 12 | 36 |

**Section- C**

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

1. i) Enumerate and explain the scope of statistics.(10 marks)

ii) Briefly explain the functions of statistics. (5 marks)

1. i) Calculate mean form the following using **direct** and **step deviation** method.(10 marks)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **X** | Less than 10 | Less than 20 | Less than 30 | Less than 40 | Less than 50 | Less than 60 | Less than 70 | Less than 80 |
| **F** | 4 | 16 | 40 | 76 | 96 | 112 | 120 | 125 |

 ii) Compute median. (5 marks)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mid Values** | 115 | 125 | 135 | 145 | 155 | 165 | 175 | 185 | 195 |
| **Frequency** | 6 | 25 | 48 | 72 | 116 | 60 | 38 | 22 | 3 |

1. Following are the marks scored by two students Suraj and Dheeraj in ten tests of 100 marks each.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Tests** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **Suraj** | 40 | 80 | 76 | 48 | 52 | 72 | 68 | 56 | 60 | 56 |
| **Dheeraj** | 48 | 75 | 54 | 60 | 63 | 69 | 72 | 51 | 72 | 60 |

 Find who is the better scorer and if consistency is the criterion for awarding prize who should get the prize?

**Section – D**

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

1. i) Find A & B if mean is 59.3. N= 50. (5 marks)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **X** | 40 | 45 | 50 | 60 | 70 | 80 | 100 |
| **F** | 3 | A | 16 | 12 | 6 | B | 2 |

 ii) Given below are the figures of production of sugar in a factory. Fit a straight line using least square method. Show the actual and trend line on a graph. Estimate the production for 2013 and 2014. (10 marks)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| **Production** | 154 | 176 | 188 | 170 | 182 | 196 | 180 |