Assignment for Block 1 & Block 2

1. The following are the marks (out of 100) of 60 students in mathematics.  
   16, 13, 5, 80, 86, 7, 51, 48, 24, 56, 70, 19, 61, 17, 16, 36, 34, 42, 34, 35, 72, 55, 75, 31, 52, 28,72, 97, 74, 45, 62, 68, 86, 35, 85, 36, 81, 75, 55, 26, 95, 31, 7, 78, 92, 62, 52, 56, 15, 63, 25,36,54,44,47,27,72,17,4,30.  
   Construct a grouped frequency distribution table with width 10 of each class starting from 0 – 9.

2) During a season of 50 days, the data regarding the numbers of roses grown daily on the different plants in a garden are given below. Prepare a frequency distribution from it having one class as 30 – 39.

34 35 37 39 39 54 52 39 71 75 74 76 84 96 23 33 51 39 26 46 65 65 53 53 72 71 84 94 34 24 99 19 18 27 17 38 45 55 57 66 82 85 35 19 18 28 47 52 64 75

3) What is Statistics? Explain Descriptive Statistics and Inferential Statistics?

4) Importance of Statistics.

5) Define – Variance

6) Define Sample and Population

7) Explain Cluster Sampling and Stratified Sampling

8) Define Types of Analysis. (Qualitative Analysis & Quantitative Analysis)

9) The following data represent monthly income (in Rs.) of workers in a factory. Find their mean income.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Income (Rs.) | 2000-3000 | 3000-4000 | 4000-5000 | 5000-6000 | 6000-7000 | 7000-8000 | 8000-9000 |
| No. of workers | 2 | 3 | 7 | 15 | 25 | 16 | 12 |

1. Frequency distribution for the monthly total return on the S&P 500, January 1926 to December 2017. Find Mean, Median, Mode, Quartiles, D8, D3, P25, P69.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Return Interval (%) | -10.0 to -8.0 | -8.0 to  -6.0 | -6.0 to -4.0 | -4.0 to -2.0 | -2.0 to 0.0 | 0.0 to 2.0 | 2.0 to 4.0 | 4.0 to 6.0 | 6.0 to 8.0 | 8.0 to 10.0 | 10.0 to 12.0 |
| Absolute Frequency | 23 | 35 | 60 | 102 | 166 | 240 | 190 | 143 | 64 | 26 | 15 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Calculate Mean Median** | | | | | | | | | | | | | | | | |
|
| **a)** | | **10** | | **8** | | **14** | | **25** | | **8** | | **9** | | **54** | | **7** | **8** | | **5** | |
|  | |  | |  | |  | |  | |  | |  | |  | |  |  | |  | |
| **b)** | | **58** | | **41** | | **25** | | **77** | | **22** | | **54** | | **58** | | **24** | **86** | | **54** | |
|  | |  | |  | |  | |  | |  | |  | |  | |  |  | |  | |
| **c)** | | **17** | | **25** | | **26** | | **89** | | **74** | | **41** | | **25** | | **87** | **84** | | **57** | |
|  | |  | |  | |  | |  | |  | |  | |  | |  |  | |  | |
| **d)** | | **10** | | **33** | | **96** | | **13** | | **78** | | **54** | | **26** | | **35** | **95** | | **55** | |
|  | |  | |  | |  | |  | |  | |  | |  | |  |  | |  | |
| **e)** | | **85** | | **26** | | **24** | | **98** | | **88** | | **74** | | **58** | | **96** | **33** | | **66** | |
|  | |  | |  | |  | |  | |  | |  | |  | |  |  | |  | |
| **f)** | | **25** | | **88** | | **74** | | **58** | | **78** | | **52** | | **58** | | **65** | **65** | | **21** | |
| **Find the median for the data 9,7,5,7,5,4,7.** | | | | | | | | | | | | | | | | | | | | |
|  | |  | |  | |  | |  | |  | |  | |  | | |  | |  | |
| **Find the median of the first 5 natural numbers.** | | | | | | | | | | | | | | | | | | | | |
|  | |  | |  | |  | |  | |  | |  | |  | | |  | |  | |
| **What is the median of 12,52,59,65,25,62,35,** | | | | | | | | | | | | | | | | | | | | |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| following are the marks obtained by 10 students in an examination calculate Arithmetic Mean : | | | | | | | | | | |
|
|  |  |  |  |  |  |  |  |  |  |  |
| **Roll No.** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| **Marks** | **59** | **87** | **59** | **84** | **32** | **25** | **89** | **74** | **58** | **95** |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| **Roll No.** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** |  |
| **Marks** | **25** | **85** | **41** | **59** | **74** | **19** | **36** | **65** | **95** |  |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| b) Marks obtained by 40 students in an exam are given below. | | | | | | |  |  |  |  |  |
|  | | | | | | |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **Marks** | **30** | **25** | **20** | **22** | **28** |  |  |  |  |  |  |
| **Number of Students** | **10** | **14** | **8** | **12** | **8** |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| c) Find the mean of the following distribution: | | | | | |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **x** | 4 | 6 | 9 | 10 | 15 |  |  |  |  |  |  |
| **f** | 5 | 10 | 10 | 7 | 8 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Calculate the mean for the following distribution: | | | | | |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **x** | 55 | 66 | 77 | 88 | 99 |  |  |  |  |  |  |
| **f** | 44 | 88 | 14 | 11 | 3 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **calculate the mean (continuous series)** | | | | | | |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **income between (rs.)** | | **100--200** | | **200--300** | | **300--400** | | **400--500** | | **500--600** | |
| **No. of persons** | | **8** | | **7** | | **41** | | **51** | | **14** | |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **marks obtained** | | **10--20** | | **20--30** | | **30--40** | | **40--50** | | **50--60** | |
| **No. of Student** | | **25** | | **14** | | **58** | | **74** | | **14** | |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **income between (rs.)** | | **100--200** | | **200--300** | | **300--400** | | **400--500** | | **500--600** | |
| **No. of persons** | | **15** | | **33** | | **63** | | **85** | | **100** | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **calculate Median (continuous series)** | | | | | |
|  |  |  |  |  |  |  |
| **Items** | **0--5** | **5--10** | **10--15** | **15--20** | **20--25** |  |
| **Frequency** | **1** | **8** | **2** | **3** | **12** |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| **Items** | **10--15** | **15--20** | **20--25** | **25--30** | **30--35** |  |
| **Frequency** | **5** | **8** | **7** | **5** | **14** |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| **Items** | **2--4** | **4--6** | **6--8** | **8--10** | **10--12** |  |
| **Frequency** | **8** | **7** | **5** | **4** | **10** |  |

Also find Standard Deviation and Variance from the above data.

GM & AM practical which was done in class.