PRACTICAL NUMBER 2

**Presentation of data through multiple line chart, frequency polygon, ogive**.

**Question 1**: Present the following frequency table containing marks of 20 students in 4 subjects using multiple line charts.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ROLLNO | S1 | S2 | S3 | S4 | TOTAL | PERCENTAGE |
| 1 | **76** | **87** | **32** | **54** | **249** | **62.25** |
| 2 | **67** | **67** | **43** | **98** | **275** | **68.75** |
| 3 | **87** | **38** | **79** | **37** | **241** | **60.25** |
| 4 | **57** | **63** | **98** | **23** | **241** | **60.25** |
| 5 | **79** | **45** | **67** | **23** | **214** | **53.5** |
| 6 | **35** | **76** | **57** | **67** | **235** | **58.75** |
| 7 | **98** | **78** | **98** | **87** | **361** | **90.25** |
| 8 | **97** | **34** | **54** | **34** | **219** | **54.75** |
| 9 | **96** | **78** | **34** | **78** | **286** | **71.5** |
| 10 | **85** | **21** | **67** | **56** | **229** | **57.25** |
| 11 | **75** | **67** | **65** | **56** | **263** | **65.75** |
| 12 | **68** | **23** | **67** | **43** | **201** | **50.25** |
| 13 | **87** | **87** | **76** | **98** | **348** | **87** |
| 14 | **90** | **54** | **90** | **98** | **332** | **83** |
| 15 | **43** | **45** | **76** | **99** | **263** | **65.75** |
| 16 | **33** | **93** | **43** | **65** | **234** | **58.5** |
| 17 | **78** | **83** | **23** | **76** | **260** | **65** |
| 18 | **56** | **12** | **85** | **67** | **220** | **55** |
| 19 | **84** | **54** | **35** | **45** | **218** | **54.5** |
| 20 | **92** | **87** | **67** | **45** | **291** | **72.75** |
|  | **74.15** | **59.6** | **62.8** | **62.45** |  |  |
| AVERAGE OF S1 S2 S3 S4 = | | | **64.75** |  |  |  |
| AVERAGE OF PERCENTAGE= | | | **64.75** |  |  |  |

***Multiple lines chart:***

***Interpretation:***

We can observe that for the 7th student, all series attain a peak. Therefore this student has attained the maximum marks of all the students.

**Question 2**: Plot the histogram, frequency polygon, frequency curve of the given table:

|  |  |
| --- | --- |
| x | f |
| 0-10 | **3** |
| 10-20 | **4** |
| 20-30 | **5** |
| 30-40 | **6** |
| 40-50 | **3** |
| 50-60 | **3** |
| 60-70 | **2** |

***Histogram:***

***Frequency polygon:***

***Frequency Curve:***

***Interpretation:***

It can be observed by the graph that the interval 30-40 attains maximum frequency.

**Question 3**: Plot histogram, frequency polygon, frequency curve for the following data:

|  |  |
| --- | --- |
| X | F |
| 0-20 | 3 |
| 20-40 | 8 |
| 40-60 | 10 |
| 60-80 | 17 |
| 80-100 | 8 |
| 100-120 | 3 |

***Histogram:***

***Frequency Polygon:***

***Frequency Curve:***

***Interpretation:***

It can be observed that the interval 60-80 attains maximum frequency.

**Question 4:** Draw the ogive for the following data:

|  |  |
| --- | --- |
| X(less than) (ft) | Number of Tress |
| 7 | 25 |
| 14 | 57 |
| 21 | 92 |
| 28 | 134 |
| 35 | 216 |
| 42 | 297 |
| 49 | 341 |
| 56 | 360 |

***Ogive:***

***Interpretation:***

The accumulated value of data is 360, hence median must occur at 180 , that is 35 ft.

**Question 5:** Plot the ogive for the following data:

|  |  |
| --- | --- |
| X (more than) | CF |
| 0 | 80 |
| 20 | 76 |
| 40 | 50 |
| 60 | 28 |
| 80 | 18 |
| 100 | 9 |
| 120 | 3 |

***Ogive***

***Interpretation:***

From the graph we can predict that the median occur somewhere between 40 and 60.