**Self-Assignment -1**

**Topic: Statistics**

**Class: 10th Max. Marks: 25**

**Answer all questions. 10 × ½ = 5M**

1. The mean of 9, 11, 13, p, 18, 19 is 'p' . Then find the value of ‘p’?
2. Find the mode of first 7 prime numbers?
3. We will use mid value of a class to find \_\_\_\_\_\_\_\_\_\_.
4. Define ‘class mark of a class?
5. Find the A.M of 2 – a, 2, 2 + a?
6. In step division method to find A.M of a data, what is the formula to find ui?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Class intervals | 0 - 10 | 10 - 20 | 20 - 30 | 30 - 40 | 40 - 50 |
| Frequency | 19 | 23 | 31 | 35 | 28 |

1. Find modal class of following data?
2. Which coordinate of the intersecting point of both ogive curves represent median?
3. The median of a data having 13 observations is 23.9. If an observation 67 which is greatest than remaining was added to the data. Find median of the data?
4. Define mode of a data?

**Answer all questions. 4 × 1 = 4 M**

1. The median of the data is 8. Then find ‘x’ value?
2. Expand L.C.F of a class?
3. Explain how can you the draw the less than ogive?
4. Prathusha stated, “The average of first 8 odd numbers is 8”. Do you agree with her? Justify.

**Answer all questions. 4 × 2 = 8M**

1. Write less than cumulative frequency and greater than cumulative frequency table for the following data?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Class interval | 1 - 10 | 11 - 20 | 21 - 30 | 31 - 40 | 41 - 50 |
| Frequency | 4 | 45 | 20 | 13 | 9 |

1. Find mean of the following data?

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Observation | 0 | 1 | 2 | 3 | 4 | 5 |
| Frequency | 1 | 10 | 18 | 62 | 6 | 3 |

1. The mean marks of a student in 5 subjects is 65. In the sixth subject, he got 20 marks more than this mean. Find the mean mark of the student in all 6 subjects?
2. During the medical check-up 0f 35 students of a class, their weights were recorded as follows. Write the frequency distribution table to it with classes and frequency.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weight in kg | Less than 38 | Less than 40 | Less than 42 | Less than 44 | Less than 46 | Less than 48 | Less than 50 |
| No.of students | 0 | 3 | 7 | 13 | 28 | 32 | 40 |

**Answer all questions. 2 × 4 = 8 M**

1. Find the median of the following data

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Class interval | 10 - 25 | 25 - 40 | 40 - 55 | 55 - 70 | 70 - 85 | 85 - 100 |
| Frequency | 2 | 3 | 7 | 6 | 6 | 6 |

Or

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Class intervals | 40 - 45 | 45 - 50 | 50 - 55 | 55 - 60 | 60 - 65 | 65 - 70 | 70 - 75 |
| Frequency | 2 | 3 | 8 | 6 | 6 | 3 | 2 |

Find median of the following data

1. If mean of the following data is 50, find f1 and f2

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Class | 0 - 20 | 20 - 40 | 40 - 60 | 60 - 80 | 80 - 100 | Total |
| Frequency | 17 | f1 | 32 | f2 | 19 | 120 |

Or

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Class interval | 0 - 10 | 10 - 20 | 20 - 30 | 30 - 40 | 40 - 50 | 50 - 60 |
| Frequency | 5 | x | 20 | 15 | y | 5 |

Find the values of x and y if median of the following data of 60 observations is 28.5