Grouped Data

A. Choose the correct answer:

1. What is the mid-point of the class interval 30-40?

a) 35	b) 30

c) 40 d) 45

2. In a grouped frequency distribution, the difference between the upper and lower limit of a class is called

- a) Frequency b) Mid-value
- c) Class width d) Cumulative frequency

3. Which of the following is not required to draw a histogram

- a) Class intervals b) Frequencies
- c) Mid-values d) Lower limits

4. If the lower boundary of a class is 20 and the class width is 10, then the upper boundary is

a) 25 b) 30 c) 20 d) 35

5. The grouped data is particularly useful when

- a) The number of observations is large
- b) The number of observations is small
- c) Data is categorical
- d) None of these

B. Write the Missing Terms to Complete the Sentences:

- 1. The difference between the highest and lowest value in the data is called ______
- 2. In grouped data, the number of observations in each class is called ______
- 3. A ______ frequency table displays data in class intervals
- 4. The sum of all frequencies is called the ______ frequency
- 5. Grouped data helps in better _____ of large data sets

C. Mark each sentence with a True (\checkmark) or False (X):

1. In grouped data, each class must have the same class width	
2. Cumulative frequency always decreases as we move to higher classes	
3. A histogram is used to represent grouped data	
4. The sum of all frequencies gives the total number of observations	

5. In a grouped frequency table, overlapping class intervals are preferred ______

D. Figure out the answers to these questions:

- 1. Draw a grouped frequency distribution table for the marks obtained by students 35, 42, 47, 51, 38, 49, 53, 45, 39, 48, 55 using class intervals of width 10.
- 2. Find the class mark of the class 60-7.
- 3. If the frequency of class 20-30 is 5 and 30-40 is 8, what is the cumulative frequency up to 40.
- 4. Create your own data of 10 observations and group them into 3 class intervals.
- 5. Find the range of the following grouped data Classes 10-20, 20-30, 30-40 with maximum observation 38 and minimum observation.

E. Challenge yourself with these questions:.

- 1. Identify the errors if the class intervals are written as 0-10, 10-20, 20-30, 30-35
- Find the cumulative frequency if classes and frequencies are 0-10 (3), 10-20 (7), 20-30 (5).
- 3. Write one advantage and one disadvantage of using grouped data.
- 4. Prepare a frequency distribution table using the following marks 56, 78, 45, 62, 89, 91, 76, 84, 57, 69, 75, 80 with a class size of 10.
- 5. In a school, the heights of students were recorded and grouped in intervals. If the maximum height recorded was 165 cm and the minimum was 120 cm, what is the range.