Chapter 7 : Frequency Diagrams, Histograms, Polygon and Ogive

Question 1: Make a frequency curve of the following data.

Age (Years)	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No of Residents	150	300	500	800	1,000	900	400	100

Solution: The given data set is first converted into a histogram. Mid-points o the top of the rectangles of the histogram are marked. These points are joined through a freehand smoothed curve, as given below.



Question 2: Prepare histogram and frequency polygon from the following data.

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No of Students	5	8	15	11	6	4

Solution







Number of students corresponding to different range of marks

Question 3: Draw the 'less than' and 'more than' ogive on the same graph paper from the data given below.

Weekly wages (₹)	No of workers
0-20	10
20-40	20
40-60	40
60-80	20
80-100	10

Solution

(i) 'Less than' method

Weekly wages (₹)	C.F
Less 20	10
Less 40	30
Less 60	70
Less 80	90
Less 100	100

(ii) 'More than' method

Weekly wages (₹)	C.F
Less 20	10
Less 40	30
Less 60	70
Less 80	90
Less 100	100

Both 'less than' and 'more than' ogives based on the above data are presented in the following graph.



'Less than' and 'More than' Ogives

Question 4: Draw histogram and frequency polygon for the following distribution.

Age (Years)	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No of Residents	30	40	60	100	70	40	30	20

Solution: Number of residents corresponding to different age group









Number of residents corresponding to different age groups

Question 5: Draw a histogram, frequency polygon, and frequency curve of the following data.

Marks	0-20	20-40	40-60	60-80	80-100
No of Students	40	51	64	38	7

Solution: Cumulative Frequency table



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