STATISTICS (Q 7, PAPER 2)

LESSON NO. 5: HISTOGRAMS

2004

7 (b) The following table shows the time in minutes spent by customers in a cafeteria.

Time in minutes	0 – 10	10 – 20	20 – 40	40 – 70
Number of customers	80	100	160	60

[Note that 10 – 20 means at least 10 but less than 20 minutes etc.]

(i) Find the total number of customers.

(ii) Draw a histogram to represent the data.

(iii) By taking the data at the mid-interval values, calculate the mean number of minutes per customer.

(iv) What is the greatest number of customers who could have spent more than 30 minutes in the cafeteria?

(v) What is the least number of customers who could have spent more than 30 minutes in the cafeteria?

2002

7 (c) The grouped frequency table below refers to the marks obtained by 85 students in a test:

Marks	0 – 40	40 – 55	55 – 70	70 – 100
Number of students	16	18	27	24

[Note: 40 – 55 means 40 marks or more but less than 55 etc.]

(i) What percentage of students obtained 55 marks or higher?

(ii) Name the interval in which the median lies.

(iii) Draw an accurate histogram to represent the data.

2000

7 (b) The table shows the distribution of points obtained by 50 people who took a driving test.

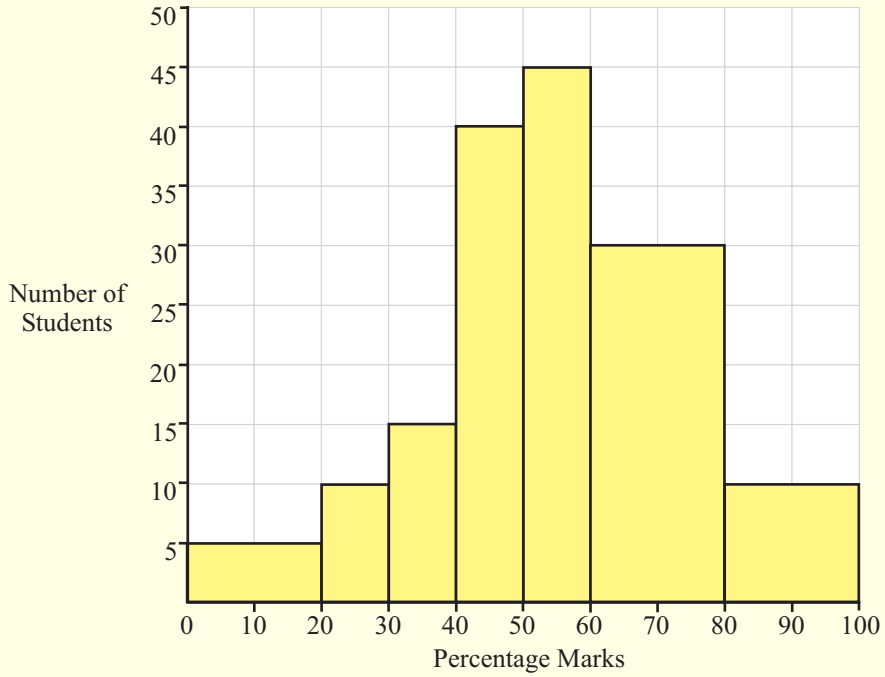
Points obtained	0 – 20	20 – 40	40 – 80	80 –100
Number of people	4	8	28	10

(i) Draw a histogram to illustrate the data.

(ii) To pass the driving test a person must obtain 65 points or more. What is the greatest possible number of people who passed the test?

1998

7 (b) The distribution of percentage marks awarded to a group of 200 Leaving Certificate students in a particular subject is shown in the histogram below.



(i) If 45 students obtained between 50% and 60%, copy and complete the frequency table below.

Marks (%)	0 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 80	80 – 100
Frequency					45		

(ii) What is the greatest possible number of students who could have obtained a grade C or better (i.e. mark ≥ 55)?

1996

7 (c) The grouped frequency table below shows the minutes spent in a shopping complex by a number of people:

Minutes	5 – 15	15 – 25	25 – 35	35 – 65
Number of people	10	50	80	60

Note that 5–15 means that 5 is included but 15 is not, etc.

(i) Draw a histogram to illustrate the data.

(ii) Calculate the mean number of minutes spent per person in the shopping complex, taking 10, 20 etc. as mid-interval values.

ANSWERS

2004 7 (b) (i) 400 (iii) 25 (iv) 220 (v) 60

2002 7 (c) (i) 60% (ii) 55 – 70

2000 7 (b) (ii) 38

1998 7 (b) (i)

Marks (%)	0 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 80	80 – 100
Frequency	10	10	15	40	45	60	20

(ii) 125

1996 7 (c) (ii) 32.5 minutes