STATISTICS (Q 7, PAPER 2)

2011

7. **(a)** Calculate the mean of the numbers 8, 6, 1, 3, 7, 8, 2.

(b) An information evening was held at a school. The number of people who entered the school during 20 minute intervals, beginning at 18:00, is given in the following table:

Time	Number of people
18:00 – 18:20	35
18:20 – 18:40	55
18:40 – 19:00	190
19:00 – 19:20	140
19:20 – 19:40	110
19:40 – 20:00	70

[Note: 18:20 – 18:40 means 18:20 or later, but before 18:40, etc.]

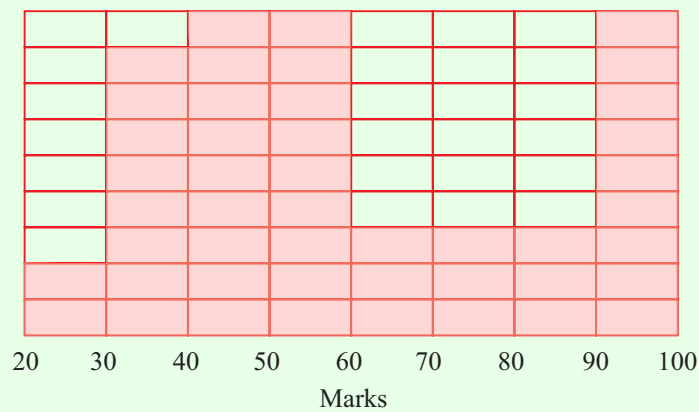**(i)** Copy and complete the following cumulative frequency table:

Time	Number of people
Before 18:20	
Before 18:40	
Before 19:00	
Before 19:20	
Before 19:40	
Before 20:00	

(ii) Draw the cumulative frequency curve (ogive).

(iii) Use your curve to estimate the interquartile range.

PTO

(c) The histogram represents the marks obtained by candidates in an examination.

Marks

(i) Copy and complete the following frequency table:

Marks	20 – 30	30 – 40	40 – 60	60 – 90	90 – 100
Number of candidates	4				

(ii) The mean mark was 60. Taking the mid-interval values of the completed frequency table, find the standard deviation, correct to the nearest integer.

(iii) Find the maximum possible number of candidates whose marks were within one standard deviation of the mean.

ANSWERS
7   (a) 5
      (b) (iii) 43 minutes
      (c) (ii) 22   (iii) 70