STATISTICS (Q 7, PAPER 2)

2000

7 (a) Find the weighted mean of 11, 15, 19 and 21 if the weights are 2, 3, 1 and 2 respectively.

(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?

(c) The table below refers to the number of emergency calls recorded at a fire station each week for 52 weeks.

No. of emergency calls	0 - 10	11 - 20	21 - 30	31 - 40	41 - 50	51 - 60	61 - 70
Number of weeks	6	8	11	12	7	5	3

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

No. of emergency calls	≤ 10	≤ 20	≤ 30	≤ 40	≤ 50	≤ 60	≤ 70
Number of weeks	6						52

(ii) Draw the cumulative frequency curve.

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

(iv) Use your graph to estimate the number of weeks during which more than 56 emergency calls were recorded.

ANSWERS

7 (a) 16

(b) (ii) 38

(c) (i)

No. of emergency calls	≤ 10	≤ 20	≤ 30	≤ 40	≤ 50	≤ 60	≤ 70
Number of weeks	6	14	25	37	44	49	52

(ii) 24 (iii) 5