(Answer all the questions)

1. **Consider the following frequency distribution table for the following questions.**

Class	43-45	46-48	49-51	52-54	55-57
Frequency	9	11	7	13	10

    (i)   Sketch the cumulative frequency polygon. Hence, locate the D_7 and Q_1.   **[4]**

    (ii)   Find the median and mean deviation from the median.   **[5]**

    (iii)   Find the geometric mean.   **[4]**

2. If the correlation coefficient of the two variables x and y is 0.87 and regression **[7]** coefficient of x on y is 1.45. Also, $\bar{x} = 37.5$ and $\bar{y} = 51.6$.

        (i)   Find the regression coefficient of y on x.

        (ii)   Find and sketch the regression line y on x.

        (iii)   Predict the value of y when x is 41. Also, verify your result graphically.