



**United International University**  
**School of Science and Engineering**

CT-04 Trimester: Summer-2020 Section: C

Course Title: Probability and Statistics

Course Code: Stat 205 Marks: 20 Time: 40 Mins

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**(Answer all the questions)**

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

<b>Class</b>	43-47	48-52	53-57	58-62	63-67
<b>Frequency</b>	12	9	6	15	8

- (i) Sketch the cumulative frequency polygon. Hence, locate the  $D_3$  and  $Q_1$ . [4]
- (ii) Find the median and mean deviation from the median. [5]
- (iii) Find the geometric mean. [3]

**2. Estimate the first four raw moments about  $A = 50$ ; convert them to the central moments. Also, find the co-efficient of skewness and kurtosis. Make comments about the distribution. [8]**

$$\begin{aligned}m_2 &= m'_2 - m_1'^2; \\m_3 &= m'_3 - 3m'_2m'_1 + 2m_1'^3; \\m_4 &= m'_4 - 4m'_3m'_1 + 6m'_2m_1'^2 - 3m_1'^4\end{aligned}$$