



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

CT-04 Trimester: Summer-2020 Section: B

Course Title: Probability and Statistics

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

**(Answer all the questions)**

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

Class	37-41	42-46	47-51	52-56	57-61
Frequency	8	15	9	12	6

- (i) Sketch the histogram and derive frequency polygon from it. [4]
- (ii) Find the standard deviation and its coefficient. [5]
- (iii) Find the harmonic mean. [3]

**2. Estimate the first four raw moments about  $A = 45$ ; convert them to the central moments. Also, find the co-efficient of skewness and kurtosis. Make comments about the distribution. [8]**

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