



**UNIVERSITY OF RUHUNA**  
**FACULTY OF TECHNOLOGY**  
Department of Engineering Technology  
Department of Information and Communication Technology  
TMS2213:PROBABILITY AND STATISTICS

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Assignment No : 01

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1. The following data represent the number of absentees from a school on 50 consecutive dates.

49 41 45 52 47 46 42 43 46 48 45 46 56 44 61 68 54  
58 51 47 47 49 42 48 53 48 41 65 45 52 58 50 55 45  
43 62 63 45 58 43 42 47 43 49 46 52 43 44 47 40

- (a) Prepare a frequency table taking suitable class intervals.  
(b) Construct a histogram, a frequency polygon, and an Ogive.

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2. The following data represents the number of runs per innings a player has scored in a season:

32 35 40 42 35 37 43 46  
54 3 57 126 115 65 38 39

- (a) Construct an ordered stem and leaf plot to display the data.  
(b) Determine whether there are any outliers according to the stem and leaf plot.

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3. You are conducting a survey among a group of 30 individuals to determine their favorite forms of entertainment. Each person is asked to name their preferred type of entertainment. Here are the responses from the individuals:

Movies Music Video\_Games Books Sports TV\_Shows TV\_Shows  
Music Movies Video\_Games Video\_Games Video\_Games Books Sports  
Sports Movies Sports Movies TV\_Shows Books Books Video\_Games  
TV\_Shows Movies Video\_Games Books Movies Music Movies Sports

- (a) Prepare a frequency table for the above data.  
(b) Construct a pie chart and a bar graph to visualize the data.
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4. The following data show the method of payment by 16 customers in a supermarket checkout line. Here,  $C$  refers to cash,  $CK$  to check,  $CC$  to credit card, and  $D$  to debit card, and  $O$  stands for other.

$C \quad CK \quad CK \quad C \quad CC \quad D \quad O \quad C \quad CK \quad CC \quad D \quad CC \quad C \quad CK \quad CK \quad CC$

- (a) Construct a frequency distribution table.
- (b) Calculate the relative frequencies and percentages for all categories.
- (c) Draw a pie chart for the percentage distribution.

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5. You are conducting a survey to estimate the average age of students in a college. The college has a total of 800 students. To obtain a representative sample, you decide to use simple random sampling. Explain the steps you would take to create a sample of 100 students and calculate the average age based on your sample data.

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6. There are 180 employees in a school. The table shows the number of each type of employee in the school.

Teachers	Teaching Assistants	Admin	Other
94	16	41	29

Describe a method to obtain a stratified sample of size 50 from the employees in the school.

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