



Daffodil International University
Faculty of Science & Information Technology
Department of Information Technology & Management
 Midterm Examination, Summer 26

Course Code: STAT 101; Course Title: Introduction to Statistics
Sections & Teachers: A & TBN

Time: 1:30 Hrs

Marks: 25

Answer ALL Questions

*[The figures in the right margin indicate the full marks and corresponding course outcomes.
 All portions of each question must be answered sequentially.]*

1.	a)	Identify the correct data type (quantitative or qualitative). Indicate whether quantitative data are continuous or discrete along with the correct level of measurements. i. The number of browser tabs you have open while working ii. The operating system (OS) you use on your PC iii. The daily temperature ($^{\circ}\text{C}$) in your city iv. The number of unread emails in your inbox v. The time (in minutes) it takes you to commute to campus vi. The storage size of your personal computer in gigabyte	[Marks-3]	CLO-1 Level-2
	b)	We want to analyze the average amount of time per week final-year students spend using version control systems like Git. We surveyed a random sample of 100 students. Three of them reported spending 3, 5, and 7 hours weekly. Identify the key statistical terms in this study.	[Marks-2]	
2.		The data below shows the number of minutes 30 students spent on reading in a single day: 30, 35, 40, 49, 54, 57, 61, 43, 48, 37, 45, 51, 68, 70, 73, 75, 84, 88, 66, 53, 46, 60, 59, 38, 42, 65, 81, 50, 36, 47		CLO-2 Level-3
	a)	Construct a frequency distribution table for the students reading time and create a histogram to display the frequency distribution.	[Marks-5]	
	b)	What percentage of students spent between 40 and 60 minutes on reading?	[Marks-2]	
	c)	Calculate that $A.M \geq G.M \geq H.M..$	[Marks-6]	
3.	a)	A startup records the daily number of app downloads for two competing mobile apps over 14 days. App A: 40, 42, 45, 50, 50, 52, 55, 58, 60, 62 App B: 14, 17, 20, 25, 28, 32, 35, 40, 45, 52 Calculate Range, Mean Deviation, standard deviation and CV for both apps. Which app shows more variability in download behavior?	[Marks-7]	CLO-3 Level-3

Formulas	$\text{\#classes } K = 1 + 3.32 \log(N)$ $A.M. = \frac{\sum_{i=1}^n x_i}{n}$ $G.M. = \text{Antilog} \frac{1}{n} \sum_{i=1}^n \log x_i$ $H.M. = \frac{1}{\frac{1}{x_1} + \frac{1}{x_2} + \dots + \frac{1}{x_n}}$	$\text{Range} = \text{Max} - \text{Min}$ $\text{Mean Deviation} = \frac{\sum_{i=1}^n x_i - \bar{x} }{n}$ $\text{Variance} = \frac{\sum_{i=1}^n (x_i - \bar{x})^2}{n-1}$ $\text{Standard Deviation} = \sqrt{\text{variance}}$		
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