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Daffodil International University

Department of Software Engineering

Faculty of Science & Information Technology Midterm Examination, Spring-2024

Course Code: STA 101, Course Title: Statistics I

Level: 2 Term:1 Batch: 40

Sections & Teachers: All

Time: 1 Hour and 30 Minutes **Marks: 25**

Answer ALL Questions [Optional]

[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)	Consider the set of all students of Software Engineering department, DIU enrolled Statistics I course this semester. Suppose you are interested to know the current grade point average (GPA's) of the students. Define the population and variable of interest. Is the variable qualitative or quantitative?	[2]	CLO1 Level-1
	b)	What are the common measures of central tendency? In the presence of outlier(s) Which measure of central tendency is more representative and why?	[3]	
2.		To evaluate the effectiveness of a processor for a certain type of task, a computer scientist recorded the CPU time (in seconds) for n = 20 randomly chosen jobs: 24 32 27 19 33 43 29 25 23 28 16 86 48 61 76 36 77 68 50 92		CLO2
	a)	Draw a Histogram for the frequency distribution. What percent of jobs are taken in less than 1 minute?	[4]	Level-2
	b)	Investigate that there is any outlier(s) in the above dataset? Also Construct a simple Box-Whisker plot and comment about the shape of the distribution of CPU time.	[6]	Level-3
	c)	In a survey of 10 SWE students, we gathered data on their weekly coding practice (in hour). The recorded times are as follows: 3.0, 2.9, 3.1, 3.6, 3.4, 2.2, 4.1, 3.5, 2.8, 4.3. Make use of the formula of Skewness and comment on your results.	[3]	Level-3
3.	a)	Two Cricketers scored the following runs in randomly selected 10 one-day matches: Watson: 42 32 40 45 17 83 59 64 76 72 Morris: 95 3 28 50 31 14 82 0 59 108 A prize is given to the best player. Compute average run of these each players of 10 one-day matches. Also, Compare that who is more consistent player in making runs by using relative measures of dispersion?	[7]	CLO3 Level-4