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RVLT

Daffodil International University
Department of Electrical and Electronic Engineering
Faculty of Engineering
Midterm Examination, Summer-2026

Course Code: 0542-221
Section: A, B, C, D
Full Marks: 25

Course Title: Probability and Statistics
Level-Term: L2-T2
Exam Date: June 29, 2026

Teacher's Initial: MAR, SS
Time: 1.5 Hours

[Answer all the following questions]
[The second right-most column indicates the COs with the respective Bloom's level]
[The right-most column indicates the assigned marks]

Q1. a) **Explain** parameter and statistics with example. CO-1 5
b) **Identify** the following variables "type" and "level of measurement" with proper justifications: C(2)
- Circuit ID
- Number of Faults per Day
- Phone Number

Q2. Two transformers are tested for their output voltage (in volts) over five trials. The recorded results are: CO-3 9 C(3)

Transformer A:	130	180	100	120	140
Transformer B:	122	126	127	130	132

a) **Compute** the average voltage output for transformer A.
b) **Identify** which transformer serves customers with more uniform output by applying the most appropriate statistical method.
c) **Calculate** the skewness for both transformers by calculating coefficient of skewness.

Q3. In an Electronics Laboratory, the power consumption values (in watts, W) of 12 devices were recorded as: CO-3 5 C(3)

18	22	15	30	24	28	20	16	35	25	32	19

a) **Construct** a frequency distribution table using an appropriate class interval.
b) **Illustrate** an appropriate graph for the above data.

Q4. An Electrical Engineering student is monitoring the current flows (in amperes, A) in 10 circuits. The measured currents are: CO-3 6 C(3)

8	9	11	12	14	17	19	21	35	45

a) **Construct** a Box-whisker plot for the data identify any outliers, if present.
b) **Choose** the most appropriate measure of central tendency for this dataset and justify your answer.