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Daffodil International University

Department of Computer Science and Engineering
Faculty of Science and Information Technology
Midterm Examination, Semester: Spring2020
Course Code: STA 133 Course Title: Statistics and Probability
Section: All Course Teacher: All

Time: 01.30 hours **Full Marks: 25**

Answer the following questions:

1. a. *Here is a frequency distribution for size of the family.* *[5]*

Family size	No. of workers
Large	16
Medium	24
Small	10

i. What type of variable family size is?
ii. What are the appropriate graphical presentation and draw one of them?
iii. What is the appropriate measure of central tendency for the above data and why

b. Mark operates Technology Titans, a Web site service that employs 20 people. If the ages of the employees are as follows: [5]
55, 18,59, 29, 46,35,41,30,79,20,37,77,49,33,40,20,35,44,38 and 28.
Find D_1. Also draw a box-plot and identify outlier if any.

c. Which measures of central tendency are appropriate for which levels of measurements o the data? Suppose 50 workers were drawn from a business enterprise by a researcher from which employed 500 workers. The researcher collected such data like workers age, wage, level of education, family size and their religion. Identify the level of measurement of each of variable. [2+3]

2 a. Stock 1's closing price over the last month has a mean of 31.2 and a standard deviation c [3]
1.9. Stock 2's closing price over the last month has a mean of 59.2 and a standard deviation of 3.3.
Which has the higher coefficient of variation?
(i) Stock 1.
(ii) Stock 2.
(iii) The coefficients of variation are the same.
(iv) The answer cannot be determined from the data provided.
Justify your answer.

b. Write down the uses of line diagram, Box plot, Bar diagram and Histogram. [2]

3. a. You are given the following data pertaining to kilowatt hours of electricity consumed by 100 persons in Dhaka: [5]

Consumption (in k-watt hours)	0-10	10-20	20-30	30-40	40-50
No. of users	6	25	36	20	13

Find 3rd quartile, mode, and standard deviation. Interpret these values.