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UG/1st Sem/STAT/(G)/T/19

2019

B.Sc.

1st Semester Examination

STATISTICS (General)

Paper : DSC 1A-T

Descriptive Statistics

Full Marks : 40

Time : 2 Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

Group-A

1. Answer *any five* questions : 2×5=10
- (a) Define population and sample. 2
- (b) What do you mean by an attribute ? 2
- (c) When a histogram is used ? 2
- (d) What is quartile deviation ? 2

[Turn Over]

- (e) What are different measures of central tendency ? 2
- (f) Give any two measures of Kurtosis. 2
- (g) Write the formula for Spearman's rank correlation. 2
- (h) What are the main scales of measurement ? 2

Group-B

2. Answer *any four* questions : $5 \times 4 = 20$

- (a) What is skewness ? Give any measures of skewness. Give the bounds of any one of your measures. $2+2+1$
- (b) Define a scatter diagram. Give the different interpretations of scatter diagram. $2+3$
- (c) Distinguish between quantitative data and qualitative data. Give examples of each type. $3+2$
- (d) Obtain the mean and standard deviation of the first n natural numbers. $2\frac{1}{2}+2\frac{1}{2}$

(e) Explain the following terms :

Frequency, relative frequency, cumulative frequency, frequency density. 5

(f) Show that mean deviation about mean cannot exceed the standard deviation. When are the two equal ? 4+1

(g) What is scatter diagram ?

Group-C

3. Answer *any one* questions : 10×1=10

(a) Describe the principle of least squares for fitting an exponential curve.

(b) What are the different relative measures of dispersion ? Discuss their uses. Show that, $|\text{Mean-Median}| \leq \text{standard deviation}$ for a set of n observations.
