15134

First Semester B.Sc. Degree Examination, November/December 2016
STATISTICS – I
Paper – I : Descriptive Statistics
(New)

Time : 3 Hours Max. Marks : 80

Instruction *: Statistical table and graph sheets are supplied on request.*

SECTION – A

I. Choose the correct answer. **(10×1=10)**

1) Mailed questionnaire method of enquiry can be adopted if respondents
   a) live in cities b) have high income
   c) are educated d) are known

2) Example for discrete variable is
   a) height and weight b) temperature
   c) no. of defective articles d) none

3) With the help of ogive curve, one can determine
   a) median b) deciles c) percentiles d) all

4) Classification is the process of arranging data in
   a) Different columns
   b) Different rows
   c) Different columns and rows
   d) Grouping of related acts in different classes

5) Sum of square of the derivations about mean is
   a) maximum b) minimum c) zero d) none

6) For percentiles the total number of partition values are
   a) 10 b) 59 c) 100 d) 99

P.T.O.

7) Sum of squares of the derivations is minimum when deviations are taken from

a) mean b) median c) mode d) zero

8) When $\beta 2<3$, the distribution is

a) leptokurtic b) platykurtic

c) mesokurtic d) none

9) For comparison of two different series, the best measured of dispersion is

a) range b) mean-deviation

c) standard deviation d) none

10) Every value of a set added by a constant, then the variance of that set is

a) unaltered b) increases

c) decreases d) not known

II. Fill in the blanks. **(5×1=5)**

11) Data originally collected for an investigation are known as _____

12) Geometric mean cannot be calculated if any value of the set is _____

13) Weighted mean is more _____ than unweighted mean.

14) When mean is 79 and variance is 64, co-efficient of variation = _____

15) For a symmetric distribution, upper and lower qualities are equidistant from _____

SECTION – B

III. Answer **any five** of the following. **(5×5=25)**

16) What do you mean by statistics ? What are the limitations of statistics ?

17) Define primary and secondary data. State the various methods of collecting primary data.

18) Explain the following graphs

i) Histogram ii) Ogive curves

19) What are the partition values ? Explain them.

20) What are the characteristics of an ideal measure of central tendency ?

21) Define standard deviation and give the merits and demerits of it.

22) Define moments. Derive the relation between "moments about mean in terms of moments of origin.

SECTION – C

IV. Answer **any four** questions. **(10×4=40)**

23) Define questionnaire. State the essential points to be remembered in drafting it.

24) Define median and mode with their respective merits and demerits.

25) If A,G and H be the AM, GM and HM respectively of two positive numbers a and b then prove that.

i) $A \geq G \geq H$ when does the equality sign hold.

ii) $G^2 = A.H$

26) Explain Quantive deviation and mean deviation. Prove that for any discrete distribution standard deviation is not less than mean deviation from mean.

27) Show that standard deviation is independent of change of origin but not of scale.

28) Define skewness and kurtosis. Explain them with diagram.