

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION MAY 2017
(First Semester)

/4STU.0 /

Branch- STATISTICS

DESCRIPTIVE STATISTICS

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

. Answer **ALL** questions

ALL questions carry **EQUAL** marks (10 x 2 = 20)

- 1 Write any two limitations of statistics.
- 2 What are the two sources of data?
- 3 Define arithmetic mean.
- 4 Define range. -
- 5 Define Karl Pearson's coefficient of correlation.
- 6 What are the types of correlation?
- 7 Define probability.
- 8 Define event.
- 9 Define discrete random variable.
- 10 Define probability mass function.

SECTION - B (25 Marks!)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

- 11 a What are the merits of demerits of census method?
OR
b Explain systematic sampling and its merits.
- 12 a Find the mean and median from the following data.
40, 50, 55, 78, 58, 60, 73, 35, 43, 48.
OR
b What are the methods of measuring dispersion?
- 13 a What are the properties of coefficient of correlation?
OR
Explain the two methods of studying regression.
- 14 a n persons are seated on n chairs at a round table. Find the probability that two specified persons are sitting next to each other.
OR
b Prove multiplication theorem of probability.
- 15 a Prove addition theorem of expectation.
OR
b Define Skewness and explain its types.

SECTION - C (30 Marks!)

Answer any **THREE** Questions

ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

- 16 Briefly explain the rules for making a diagram.
- 17 Calculate mean deviation from median and the coefficient of the following data.
x: 0- 10 10-20 20-30 30-40 40-50 50-60
f: 2 5 8 10 8 2
- 18 Determine the equation of straight line which best fits the data.
x: 10 12 13 ' 16 17' 20 25
y: • 10 22 24 27 29 33 37
- 19 State and prove Boole's inequality.
- 20 Prove that the distribution of the quotient of two random variables.