PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BA DEGREE EXAMINATION MAY 2017
(Fourth Semester)

Branch - **SOCIOLOGY**

SOCIAL STATISTICS - II WITH COMPUTER APPLICATIONS

Time : Three Hours   Maximum : 75 Marks

SECTION-A (20 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks   (1 0 x 2 = 20)

1   What is meant by dichotomous classification?

2   Define consistency of a set of class frequencies.

3   What are the methods of collecting vital statistics?

4   What is meant by life table?

5   Define time series.

6   What are the long term components of time series?

7   State addition theorem of probability.

8   Define Poisson distribution.

9   Write down the formula for calculating regression coefficient of X on Y using MS Excel.

10   Write down the formula for calculating normal probability using MS Excel.

SECTION - B (25 Marks!
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

11 a Explain the condition for consistency of data.
                        OR
    b Examine the consistency of the following data N = 1,000; (A) = 600;
        (B) = 500; (AB) = 50, the symbols having their usual meaning.

12 a Write'short notes on (i) Crude Death Rate (C.D.R) (ii) Specific Death Rates (S.D.R).
                        OR
    b List out the uses of life tables.

13 a   Briefly Explain seasonal variations.
                        OR
    b   Calculate the three yearly moving average for the following data.

Year:	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Production (in tonnes) :	50 • 36		43	45	39	38	33	42	41	34

14 a Two persons A and B appeared for an interview for a job. The probability
        of selection of A is 1/3 and that of B is $^{1/}4$. Find the probability that
        i) Both of them will be selected (ii) None of them will be selected.
                        OR
    b List out the properties of normal distribution.

15 a Write a procedure for fitting a straight line trend using Ms-Excel.

OR

b Explain the step by step procedure' for the computation of Poisson distribution using MS-Excel.

SECTION -C (30 Marks)
Answer any THREE Questions
ALL Questions Carry EQUAL Marks (3 x 10 = 30)

16 Show that whether A and B are independent, positively associated or negatively associated. (AB) = 128;'(ccB) = 384; (Ap) = 24 and (ap) = 72.

17 Compute Crude and Standardized Death Rates from the following data:

Age group (years)	A Population	Death	B Population	. Death
Under 10	20,000	600	12,000	* 372
10-20	12,000 '	240	30,000	660
20-40	50,000	1,250	62,000	1,612
40-60	30,000	1,050	15,000	325
Above 60	10,000	•500	3,000	180

18 Fit a straight line trend by the method of least square for the following data:

Year:	1983.	1984 '	1985	1986 .'	1987	1988
Sales (Rs. in lakhs):	3 *	8	7	9	11	14

Also estimate the sales for the year 1991.

19 Eight coins are tossed simultaneously. Find the probability of getting atleast six heads.

20 Write the procedure for computing coefficient of correlation using Ms-Excel.

Z-Z-Z   END