

SOCIAL STATISTICS –II WITH COMPUTER APPLICATIONS

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer ALL questions

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

- 1 When do you say two attributes are positively or negatively associated?
- 2 Define independent of attributes.
- 3 Define vital statistics.
- 4 What is crude death rate?
- 5 Define time series.
- 6 What do you mean by seasonal variation?
- 7 Define probability theorem.
- 8 State multiplication theorem on probability.
- 9 Write Ms-Excel code for finding regression coefficient.
- 10 How to find probabilities of binomial distributing using MS-Excel?

SECTION - B (25 Marks)

Answer ALL Questions

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

- 11 a Find if A and B are independent, positively or negatively associated.
 $(AB) = 256, (\alpha B) = 768, (A\beta) = 48, (\alpha\beta) = 144.$

OR

b What do you understand by consistency of data? How do you check it?
- 12 a Explain the methods of collecting vital statistics.

OR

b Write short notes about life tables.
- 13 a Give a brief note about components of time series.

OR

b Calculate trend by the methods of Least square

Year	:	2002	2003	2004	2005	2006	2007
Production	:	7	9	12	15	18	23
- 14 a Explain binomial distribution along with its properties.

OR

b The probability of a defective bolt is 0.2. find mean, standard deviation of defective bolt in a total of 1000. Also find the coefficient of Skewness.
- 15 a Find 4 yearly moving averages using MS-Excel with an example.

OR

b Write the procedure for fitting a strength line by the method of least squares using MS-Excel.

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

- 16 If $S = (AB) - (AB)$ then with usual notations prove that
- (i) $[(A) - (\alpha)][(B) - (\beta)] + 2NS = (AB)^2 + (\alpha\beta)^2 - (A\beta)^2 - (\alpha B)^2$.
- (ii) $\delta - \frac{(B)(\beta)}{N} \left[\frac{(AB)}{(13)} - \left(\frac{(A\beta)}{(\beta)} \right) \right] = \frac{(A)(\alpha)}{N} \left\{ \frac{(AB)}{A} - \frac{\alpha B}{\alpha} \right\}$.
- 17 The number of persons dying at age 75 is 476 and the complete expectations of life at 75 and 76 years are 3.92 and 3.66 years. Find the numbers living at age 75 and 76.
- 18 Explain the components of Time series.
- 19 In a Binomial distribution containing of 5 independent trials, probabilities of 1 and 2 successes are 0.4096 and 0.2048 respectively. Find the parameter P of the distribution.
- 20 Write the procedure for finding Karl Pearson coefficient of correlation MS-Excel

Z-Z-Z

END