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BBA/M-17
BUSINESS STATISTICS-II
Paper: BBA-210

Time: Three Hours

Maximum Marks: 80

Note: Attempt five questions including No. 1 which is compulsory. All questions carry equal marks.

Compulsory Question

1. Explain the following:
 - (a) Probable Error.
 - (b) Multiple Regression.
 - (c) Seasonal Variation.
 - (d) Mutually Exclusive Events.
 - (e) Poisson Distribution.
 - (f) Level of Significance.
2. Find Coefficient of correlation from the following data :

X	10	12	18	16	15	19	18	17
Y	30	35	45	44	42	48	47	46

3. Given that
 $\sum X=15$, $\sum Y=110$, $\sum XY=400$, $\sum X^2=250$, $\sum Y^2=3200$, $N=10$
 - (a) Compute the regression equation of Y on X.
 - (b) Standard Error of Estimate S_{yx}
4. Calculate the trend values by Square method for the following Time Series (Sales in ('000 Rs.) :
Years : 1980 1981 1982 1983 1984 1985 1986 1987 1988
Sales : 53 79 76 66 69 87 79 95 104
Also Calculate the Trend values by taking 4-yearly Moving Average Period.
5. A husband and wife appear in an interview for two vacancies in the same post. The probability of husband's selection is $1/7$ and that of wife selection is $1/5$. What is the probability that
 - (a) both of them will be selected?
 - (b) both of them will be rejected?
 - (c) only one of them will be selected.

6. Explain the properties of Binominal distribution. What is its relationship with Poisson distribution?
7. (a) The municipal corporation of a city installed 2000 bulbs in the streets of the city. If these bulbs have an average life of 1000 hours with a standard deviation of 200 hours, what number of bulbs might be expected to fail in the first 700 hours?
(The Table value of $Z=1.5$ is 0.432)
- (b) Assume mean height of soldiers to be 68.22 inches with a variance of 10.8 inches. How many soldiers in a regiment of 1000 would you expect to be over six feet tall?
8. What do you understand by Hypothesis ? Explain the process of testing of hypothesis ?