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BBA (Sem.–3rd)

BUSINESS STATISTICS

Subject Code : BB-304 (2007 to 2011 Batch)

Paper ID : [C0216]

Time : 3 Hrs. Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and students has to attempt any FOUR questions.**

SECTION-A

1. Write briefly :

a) State and Prove Additive law of probability.

b) Discuss the properties of coefficient of correlation.

c) Distinguish between Geometric and Harmonic mean.

d) Why standard deviation is considered to be the best in comparison with other measures?

e) State the empirical relation between mean, median and mode.

f) What do you understand by Poisson distribution? What are its properties?

g) Write a note on mean deviation. How it is different from quartile deviation?

h) State subjective approach to probability.

i) Write a note on independent and dependent events.

j) Differentiate between correlation and regression.

SECTION-B

2. The following table gives the distribution of monthly income of 600 families in a certain city.

Monthly Income	No. of families
Below 75	60
75-150	170
150-225	200
225-300	60
300-375	50
375-450	40
450 and more	20

Draw a 'less than' and a 'more than' ogive curve for the above data on the same graph and from these find the median income.

3. From the following data calculate mode.

Variable (x) :	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency (f) :	5	6	8	12	15	5	3

4. In a certain college, the students engage in various sports in the following proportions.

Football (F) : 60% of all students

Basketball (B) : 50% of all students

Both Football and Basketball : 30% of all students

If a student is selected at random, what is the probability that he will:

i) Play football or basketball

ii) Play neither sports?

5. Write regression equations of x on y and y on x for the following data:

x :	45	48	50	55	65	70	75	72	80	85
y :	25	30	35	30	40	50	45	55	60	65

6. Fit a Poisson distribution to the following data and calculate the theoretical frequencies.

x :	0	1	2	3	4
y :	123	59	14	3	1

7. Calculate mean and standard deviation of the following data:

Value :	90-99	80-89	70-79	60-69	50-59	40-49	30-39
Frequency :	2	12	22	20	14	4	1