

4. Calculate Karl Pearson's coefficient of correlation for the following data :

x	:	39	65	62	90	82	75	25	98	36	78
y	:	47	53	58	86	62	68	60	91	51	84

SECTION—C

5. In a single throw of two dice, find the probability of getting a total of 8.
6. What do you understand by binomial distribution ? What are the conditions under which a binomial distribution can be used as an approximation to an observed frequency distribution ?

SECTION—D

7. Find the estimation of two lines of regression for the data :

x	:	1	2	3	4	5
y	:	7	6	5	4	3

and hence find an estimation of y for x = 3.5.

8. Explain about the F-test for equality of variances by giving an example.

SECTION—E

9. Write short notes on the following :
- (a) Give the merits of mode.
 - (b) Define standard deviation.
 - (c) What are mutually exclusive events ? Explain by giving example.
 - (d) Explain two-tail test in hypothesis testing.
 - (e) Define correlation, positive and negative correlation.
 - (f) Explain the meaning of skewness and kurtosis.
 - (g) What is the probability that a non-leap year has 53 Sundays.
 - (h) Give the meaning of sample.

Roll No.

Total No. of Pages : 2

PC 21012-N

M-8/2111

STATISTICS—III

Semester—III

(Spl. Chance Syll.-Dec-2012)

Time Allowed : Three Hours]

[Maximum Marks : 80

Note:- Attempt any *one* question each from Sections A, B, C and D carrying 12 marks each. Entire Section E is compulsory, carrying 4 marks each.

SECTION—A

- 1. Describe the meaning and scope of Statistics.
- 2. From the following data find out missing frequencies given that mean = 35 and $N = \sum f = 68$:

Marks	:	0-10	10-20	20-30	30-40	40-50	50-60
No. of students	:	4	10	12	f_1	20	f_2

SECTION—B

- 3. Calculate Spearman's rank correlation coefficient for the data given below :

X	:	39	65	62	90	82	75	25	98	36	78
Y	:	47	53	58	86	62	68	60	91	51	84