

1128

M.Com. (Master of Entrepreneurship & Family Business)

1st Semester

FB-104: Tools for Business Research

Time allowed: 3 Hours

Max. Marks: 80

NOTE: Attempt five questions in all, selecting atleast two questions from each Unit. Students may ask the required table from the superintendent of examination centre. Only simple non-programmable calculators are allowed.

- *_ *_ *

UNIT – I

- I. (a) Some data are given as:
- | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|
| X: | 12 | 7 | 11 | 19 | 05 | 21 | 03 | 04 | 17 |
| Y: | 14 | 03 | 21 | 28 | 06 | 43 | 01 | 12 | 30 |
- Calculate the value of correlation coefficient.
- (b) From the following data, compute the coefficient of correlation between X and Y:

	X-Series	Y-Series
Number of items	15	15
Arithmetic mean	25	18
Sum of square of deviations	136	138

(8+8)

- II. (a) Difference between census and sampling method.
- (b) Difference between sampling and non-sampling errors. (8+8)

- III. (a) Three cards are drawn from a well shuffled pack of 52 cards. Find the probability that they are a king, a queen and jack.
- (b) Define probability. Discuss the importance of probability in decision making in statistics. (8+8)

- IV. (a) Four coins were tossed 200 times. Number of tosses showing 0,1,2,3 and 4 heads were observed as under:

No. of Heads	0	1	2	3	4
No. of Tosses	15	35	90	40	20

Fit a binomial distribution to these observed results.

- (b) A manufacturer of pins knows that an average 5% of his product is defective. He sells pins in a packet of 100 and guarantees that not more than 4 pins will be defective. What is the probability that a packet of pins will meet the guaranteed quality? (8+8)

- V. Define matrix. Explain its types. (16)

P.T.O.

(2)

UNIT - II

- V. (a) Explain one tailed and two tailed test.
 (b) Type-I and Type-II error
 (c) Level of significance
 (d) Power of hypothesis test (4+4+4+4)
- VI. Mean yield of wheat from Patiala district was 210kgs with a standard deviation of 10kgs per acre from a sample of 100 plots. In another district Ludhiana, mean yield was 220 kgs with standard deviation of 12 kgs from a sample of 150 plots. Assuming that standard deviation of the yield in entire state was 11 kgs. Test whether there is a significance difference between mean yield of crops in two districts. (16)
- VII. Explain meaning and significance of ANOVA. How is an ANOVA table set up and how a test is performed? (16)
- VIII. A die is thrown 192 times with the following results:-
- | | | | | | | |
|-------------------|----|----|----|----|----|----|
| Number turned up: | 1 | 2 | 3 | 4 | 5 | 6 |
| Frequency: | 28 | 32 | 33 | 29 | 34 | 36 |
- Test at 10% significance level if the die is unbiased. (16)
- IX. Define non-parametric tests? How are they different from parametric tests? (16)

*_**_*