

1127

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 at least two questions from each Unit. Students may ask the required table from the superintendent of examination centre. Only simple non-programmable calculators are allowed.

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UNIT – I

- I. a) Estimate the sales for advertising expenditure of Rs. 100 lakhs.
b) The advertisement expenditure for sales of Rs. 47 crores from the data given below:-

Sales (Rs. Crores)	14	16	18	20	24	30	32
Advertising (Rs. Lakhs)	52	62	65	70	76	80	78

(16)

- II. Define probability and explain the importance of probability in statistics. What are the various approaches to probability? (16)

- III. a) A player tosses 3 fair coins. He wins Rs. 12 if 3 heads appear, Rs. 8 if 2 heads appear and Rs. 3 if 1 head appears. On the other hand, he loses Rs. 25 if 3 tails appears. Find the expected gain of the players.
b) Four coins were tossed 200 times. The no. of tosses showing 0, 1, 2, 3 and 4 heads were obtained 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

(8, 8)

- IV. a) Distinguish between sampling and census methods.
b) Distinguish between sampling and non-sampling errors.

(8, 8)

- V. What are the chief properties of normal distribution? Describe briefly the importance of normal distribution in statistical analysis.

(16)

P.T.O.

UNIT – II

- VI. What is Analysis of Variance? What are its assumptions? Explain it for one way classification. (16)
- VII. A survey of television audience in a big city revealed that a particular height programme was liked by 50 out of 200 males and 80 out of 250 females. Test the hypothesis at 5% level of significance whether that is a great difference of opinion about the programme between the males and females. (16)
- VIII. Define hypothesis? Discuss the procedure for formulating and testing hypothesis. (16)
- IX. The demand for a particular spare part in a factory was found to vary from day to day. In a sample survey study the following information was obtained:-.

Days	Mon	Tues	Wed	Thurs	Fri	Sat
No. of Parts demanded	1124	1125	1110	1120	1126	1115

Test the hypothesis that the no. of parts demanded does not depend on the day of the week. (16)

- X. Write a note on:-

- a) Run Test and Sign Test
b) Sign Rank Test and Wilcoxon Test

(8, 8)

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