

Exam. Code: 0311  
Sub. Code: 25378

2125  
M.Com. (Entrepreneurship & Family Business)  
First Semester  
FB-104: Business Research

Time allowed: 3 Hours

Max. Marks: 80

**NOTE:** Attempt five questions in all, selecting atleast two questions from each Unit. Use of simple non-programmable calculator is allowed. All questions carry 16 marks.

x-x-x

**UNIT-I**

1. Define Research. Explain the role of Review of Literature in the stages of research process?
2. Discuss the various sources of collecting secondary data.
3. 5 coins are tossed 320 times and the number of heads that came up each time was as follows:

No. of Heads	0	1	2	3	4	5
Frequency	20	40	90	100	60	10

Are the coins balanced? Test at 5% level of significance.

4. Life of a random sample of 10 bulbs out of a pack of 50 bulbs carton shows the following readings:

Items	1	2	3	4	5	6	7	8	9	10
Life (‘000hrs)	3.8	4.5	4.0	4.0	5.3	4.2	3.9	4.5	4.3	5.5

Test at 1% level of significance if the life of bulbs is 4000 hours.

5. What procedure can be adopted to draw a sample using simple random sample?

**UNIT-II**

6. Calculate the co-efficient of correlation between Marks in Accountancy and Economics by spearman’s Method:

Marks in Accountancy	46	56	39	45	54	58	36	40
Marks in Economics	30	60	40	50	70	60	30	50

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7. Discuss the properties of Karl Pearson's Coefficient of Correlation. What are the assumptions on which this formula is based?
8. Given below the data relating to a machine process set to produce sheets of a given length:

Sample No.	1	2	3	4	5	6	7	8	9	10
Sample Means	16	17	15	18	14	17	18	15	17	15
Sample Ranges	5	11	4	12	7	8	9	4	7	7

Determine the points of central lines and the control limits for both the Mean chart and R-Chart given that  $n=5$ ,  $A_2= .577$ ,  $D_3=0$  and  $D_4= 2.115$ . Also present the two charts and comment on the state of control.

9. Explain the various tools of Statistical Quality Control.
10. Discuss the different decision rules usually adopted in the context of decision making under conditions of uncertainties.