M.Com. (Semester – I) Examination, November 2017
COC 102 : RESEARCH METHODOLOGY AND STATISTICAL ANALYSIS
(OA18)

Duration : 3 Hours

Total Marks : 60

Instructions : 1) This paper consist of **nine (9)** questions carrying **equal** marks.
2) Question No. **1** consist of 5 **compulsory** questions of **2** marks **each**.
3) Answer **any five (5)** questions from **2, 3, 4, 5, 6, 7, 8** and **9**.
4) Tables to be provided **wherever** required.

1. Answer the following questions :   (2×5=10)

   i) What do you understand by ecological fallacy in research ?

   ii) Importance of literature review in research.

   iii) What do you mean by data mining ?

   iv) Define Kurtosis.

   v) How would you evaluate a research report ?

2. The following table gives the distribution of the total population and those who are totally or partially blind among them. Find out if there is any relation between age and blindness.   10

Age (years)	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No. of Persons ('000)	100	60	40	36	24	11	6	3
Blind	55	40	40	40	36	22	18	15

3. x) In an audit of a company's billing an auditor randomly selects five bills. If 10% of all bills contains an error, what is the probability that the auditor will find :   5

   i) exactly 2 bills with error.

   ii) atleast 2 bills not containing error.

   y) Articles are produced in a large factory and 3% of them are found to be defective. They are dispatched in batches of 100. What is the probability of getting   5
   i) Non defective
   ii) Two defective.

4. A census of rentals for apartments in a city follows a normal distribution with mean Rs. 800 and standard deviation Rs. 100.   **10**

   i) What is the probability that an apartment selected at random will have its rent between Rs. 800 and Rs. 1,000 ?

   ii) What percentage of apartments will have their rent between Rs. 600 and Rs. 900 ?

   iii) What percentage of apartments will have their rent below Rs. 600 ?

5. A men buys 50 electric bulbs of Surya and 50 electric bulbs of Bajaj. We find that Surya bulbs gives an average life of 1500 hrs. with a standard deviation of 60 hrs. An Bajaj bulbs gives an average life of 1512 hrs. with a standard deviation of 80 hrs. Is there a significant difference in mean life of two make of bulbs ? Test it at 1% level of significance.   **10**

6. Identification of research gap is an important aspect research process. Discuss how does the research gaps can be identified and how it will be useful in development of research hypothesis ?

7. Give a brief account of the chief methods of collecting primary and secondary data collection.

8. How would you plan your research report writing ? Explain the various types of research report and importance of bibliography in research report.

9. A carefully designed "sample survey" is said to be better than a poorly planned and executed "census". Bring out the merits of sampling method of enquiry and atleast three of the methods to obtain representative data in a sample.

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