COURSE CODE: 19CM/PC/BR24

MCOM DEGREE EXAMNATIONS – APRIL 2022
COMMERCE
SECOND SEMESTER

COURSE   : MAJOR CORE
PAPER   : BUSINESS RESEARCH
TIME   : 3 HOURS   MAX. MARKS: 100

SECTION A

Answer any SIX questions   (6x10=60)

1. Explain different types of research with illustrations.
2. State the importance of primary data and explain the different methods of collecting primary data.
3. Write in detail different steps in report writing.
4. What is interpretation, explain the errors that might occur in interpretation.
5. Explain the steps involved in identifying a research problem.
6. Pre and post test scores after a particular training programme are known to be non-normal in their distribution. A sample of the scores, with the calculated changes is given below:

Pre-test	67	71	83	69	68	36	52	72	56	64	76	83	69	68	36	52	72	56
Post-test	58	62	84	67	72	38	63	72	55	59	76	84	69	72	38	63	74	66

   Conduct a sign test for determining whether any significant change has taken place.

7. A continuous manufacturing process of steel rods is said to be in "state of control" and produces acceptable rods if the mean diameter of all diameter of all rods produced is 2 inches. Although the process standard deviation exhibits stability over time with standard deviation = 0.01 inch. The process mean may vary due to operate error or problems of process adjustment. Periodically, random samples of 100 rods are selected to determine whether the process is producing acceptable rods. If the result of a test indicates that the process is out of control, it is stopped and the source of trouble is sought. Otherwise, it is allowed to continue operating. A random sample of 100 rods is selected resulting in a mean of 2.1 inches. Test the hypothesis to determine whether the process be continued.

8. 12 students were given intensive coaching and tests were conducted in month and marks are mentioned below before coaching and after coaching:

before coaching	50	42	51	26	35	42	60	41	70	55	62	38
after coaching	62	40	61	35	30	52	68	51	84	63	72	50

   Can it be concluded that there is no difference in marks because of coaching? (Given for 11 d.f, $t_{0.025} = 2.2$).

SECTION B

Answer any TWO questions (2x20 =40)

9. Three samples are taken comprising 120 doctors, 150 advocates, and 130 university teachers. Each person chosen is asked to select one of the three categories that best represents his feeling towards a certain national policy. The three categories are in favour of policy (F), against policy (A), and indifferent toward to policy (I). The results of the interviews are given below:

Occupation	Reaction			Total
	F	A	I	
Doctors	80	30	10	120
Advocates	70	40	40	150
University teachers	50	50	30	130
Total	200	120	80	400

Using Chi-square explain if Occupation and Reaction is independent.

10. What is sampling? Explain different types of sampling designs.

11. What is meant by plagiarism? Describe different types of plagiarisms.

12. A farmer applies three types of fertilizers on 4 different plots. The figures on yield per acre are tabulated below (use coding and deduct 10):

Fertilizers	Yield				Total
	A	**B**	**C**	**D**	
Nitrogen	16	14	18	16	64
Potash	17	16	16	19	68
Phosphates	18	15	20	19	72
Total	51	45	54	54	204

Find out if the plots are materially different in fertility, as also, if the three fertilizers make any material difference in yields.

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