



K21P 0805

Reg. No. :

Name :



II Semester M.Com. Degree (CBSS – Reg./Suppl. (Including Mercy
Chance)/Imp.) Examination, April 2021
(2014 Admission Onwards)

COM2C07 – RESEARCH METHODOLOGY AND COMPUTER APPLICATION

Time : 3 Hours

Max. Marks : 60

SECTION – A

Answer **any four** questions in this Section. **Each** question carries **1** mark for Part (a), **3** marks for Part (b) and **5** marks for Part (c).

1. a) What is a Research Problem ?
b) Differentiate between Dependent and Independent Variable.
c) "Empirical research in India in particular creates so many problems for the researchers". State the problems that are usually faced by such researchers.
2. a) What are Treatments ?
b) Explain the three important principles of experimental designs.
c) What are measures of dispersion ?
3. a) What is "Pantry audits" in data collection ?
b) Differentiate between sample Survey Vs Census survey.
c) Explain with any illustration the procedure of selecting a random sample.
4. a) What do you mean by "Field editing" ?
b) Distinguish between Null hypothesis and Alternative hypothesis.
c) The procedure of testing hypothesis requires a researcher to adopt several steps. Briefly discuss about such steps.

P.T.O.



5. a) What do you mean by parameter ?
 b) Explain the precaution in applying Chi-square test.
 c) Why sampling is used in practice ?
6. a) What is Kurtosis ?
 b) Explain Central Limit Theorem.
 c) Briefly explain about statistical estimation. (4×9=36)

SECTION – B

Answer the **two** questions in this Section. **Each** question carries **12** marks :

7. a) Analyse and interpret the following statistics concerning output of wheat per field obtained as a result of experiment conducted to test four varieties of wheat viz., A, B, C and D under a Latin Square Design.

C	B	A	D
25	23	20	20
A	D	C	B
19	19	21	18
B	A	D	C
19	14	17	20
D	C	B	A
17	20	21	15

- b) Two researchers adopted different sampling techniques while investigating the same group of customers to find the number of customers falling in different buying-intelligence levels.

Researchers	Number of customers in each level				Total
	Below average	Average	Above average	Genius	
1	86	60	44	10	200
2	40	33	25	2	100
Total	126	93	69	12	300

Are the two sampling techniques and buying intelligence significantly independent ? (Use $\alpha = 0.05$).



8. a) The table given below shows the data obtained during outbreak of smallpox :

	Attacked	Not attacked	Total
Vaccinated	31	469	500
Not vaccinated	185	1315	1500
Total	216	1784	2000

Test the effectiveness of vaccination in preventing the attack from smallpox. Test your result with the help of χ^2 at 5 percent level of significance.

b) Give your understanding of non-parametric or distribution free method explaining their important characteristics. (2×12=24)
