TM252797X

Reg. No :.....

Name :.....

MASTER'S DEGREE (C.S.S) EXAMINATION, MARCH 2025

2020, 2021, 2022, 2023 ADMISSIONS SUPPLEMENTARY

SEMESTER II - CORE COURSE

RM2C07TM20 - Research Methods and Statistics II

Time : 3 Hours **Maximum Weight : 30**

Part A

I. Answer any Eight questions. Each question carries 1 weight **(8x1=8)**

1. What is snowball sampling?
2. What is stratified random sampling?
3. What is a frequency curve?
4. What is a frequency polygon?
5. Define patent.
6. Define relevance of topic.
7. State the properties of a Normal distribution.
8. Tickets numbered 1 to 100 are put in a box and shuffled well. A ticket is drawn out at random. Find the probability of getting
   (a) a perfect square (b) a multiple of 5 (c) a number greater than 75
9. Distinguish between a Parameter and a Statistic.
10. Explain P-value of a test.

Part B

II. Answer any Six questions. Each question carries 2 weight **(6x2=12)**

11. Explain the process of systematic random sampling. Give the advantages and limitations.
12. Distinguish between Histogram and Bar diagram.
13. List the points to be considered while framing the title of a study.
14. Differentiate APA and MLA style I writing bibliography.
15. If heights of students is Normally distributed with mean 165 cms and standard deviation 5 cms, find the probability that the height of a student is (i) more than 177 cms (ii) less than 162 cms.
16. Two unbiased dice are tossed. Find the probability of getting
    (i) a sum of 8 (ii) a product of 12 (iii) the number 5 on one die only
17. What is meant by sampling distribution? Write the inter-relationship between normal, t, χ^2 and F distributions.
18. Explain Central Limit Theorem and its importance.

Part C

III. Answer any Two questions. Each question carries 5 weight **(2x5=10)**

19. Describe the various types of non-probability sampling. State the advantages and disadvantages.
20. What is research design? Discuss the role of research design in conduct of a research.
21. (i) Define (a) Sample space (b) Event (c) Probability of an event.
    (ii) In a random experiment of drawing a card from a well shuffled deck of cards, find the probability of obtaining (a) a king (b) a diamond (c) a red ace.

22. Given the following contingency table test whether there is any association between hair colour and eye colour.

Hair colour → ↓ Eye colour	Blound	Brown	Black
Blue	15	5	20
Gray	20	10	20
Brown	25	15	20