Code No. : 8071   Sub. Code : ZCAM 34

M.C.A. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2023.

Third Semester

Computer Applications — Core

RESEARCH METHODOLOGY

(For those who joined in July 2021–2022)

Time : Three hours   Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Quantitative research is based on the measurement of
   (a) quantity
   (b) amount
   (c) both (a) and (b)
   (d) none

2. _____ approach involves the construction of an artificial environment within which relevant information and data can be generated.
   (a) Simulation
   (b) Experimental
   (c) Inferential
   (d) Qualitative

3. The source list is also called _____
   (a) sample unit
   (b) sampling frame
   (c) sample design
   (d) sampling type

4. Which scaling technique is commonly need
   (a) Concept development
   (b) Interpretability
   (c) Selection of indicator
   (d) Formation of index

5. Types of ANOVA technique are
   (a) one way
   (b) two way
   (c) only a
   (d) both (a) and (b)

6. Chi-square test is a most common test of statistical significance in _____ scale.
   (a) Nominal
   (b) Ordinal
   (c) Interval
   (d) Ratio

7. _____ is an expensive method in data collection.
   (a) Observation
   (b) Interview
   (c) Pre-requisite
   (d) Focused

8. How many types in report?
   (a) 4
   (b) 5
   (c) 3
   (d) 2

9. Computers used binary system because the electrical devices can understand 'on' indicates
   (a) 0
   (b) 1
   (c) −1
   (d) 2

10. Second generation computer developed in ————
    (a) 1945
    (b) 1947
    (c) 1949
    (d) 1954

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 250 words.

11. (a) Explain data collection in research process.

Or

(b) Discuss the different research designs.

12. (a) Write the characteristics of good sample design.

Or

(b) Write about measurement scales and its types.

13. (a) Explain the limitations of chi-square test.

Or

(b) Write note on the principles of one-way ANOVA.

14. (a) Explain the collection of secondary data.

Or

(b) Discuss the techniques of interpretation.

15. (a) Write the steps involved in algorithmic research.

Or

(b) Discuss the computer and computer technology.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 600 words.

16. (a) Briefly describe the different steps involved in research process.

Or

(b) What are the techniques involved in defining a research problem?

17. (a) Discuss the implication of sample design.

Or

(b) Discuss test and sound measurement.

18. (a) Discuss the test of goodness of fit with examples.

Or

(b) Describe one-way analysis of variance.

19. (a) Describe about interview method

Or

(b) Write a note on interpretation and its precautions.

20. (a) What is meta heuristics for combinational problem?

Or

(b) Write about :
    (i) computer and researchers
    (ii) computer applications.