

Reg. No.

**MANIPAL UNIVERSITY**

**SEVENTH SEMESTER B. ARCH. DEGREE EXAMINATION – FEBRUARY 2016**

**SUBJECT: ARC 411 – RESEARCH TECHNIQUES  
(2010 SCHEME)**

Wednesday, February 24, 2016

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

- ✍ Answer any FIVE full questions.
- ✍ Illustrate your answers with neat and proportionate sketches.

- 1A. What are the three main uses of literature review?
- 1B. What are the four types of hypothesis? Define and explain with examples.
- 1C. What are the six ways in which artefact could occur?

(3+4+3 = 10 marks)

- 2A. The aim is to find the historic evolution of 'Ratha' in the temples of Udupi district. What are the types of evidence that can be used for this research and value given to it?
- 2B. Explain the ways of choosing historical interpretation with points and diagrams.

(5+5 = 10 marks)

3. The aim is to find the preference of people for the aesthetics of design and functions housed in a community center for residents of Udupi town.
- 3A. Explain the method of research design with respect to ways of collecting data, analysis techniques and representation of conclusion.
- 3B. Name any eight characteristics that make this a qualitative research.

(6+4 = 10 marks)

- 4A. Explain the terms Random sampling, Stratified sampling, Proportionate allocation sampling, Optimal allocation sampling and cost-optimal sampling.
- 4B. A population is divided into three strata of strength 500, 400 and 300. Construct the sample of size  $n = 90$  with proportionate allocation. How can we make the sample more representative by optimal allocation three strata have standard deviations are 7, 4 and 2 respectively?
- 4C. Explain the relevance of sample size in research involving sample studies.

(10 marks)

5. "Comfort in seating" while seated on a chair for casual reading/ conversation/ watching TV etc. depends on many factors associated with the chair like back- rest angle, cushion material, hand rest, height of seating, width of seat etc. A study is to be done to understand the relation between "seating comfort" and back-rest angle.

- 5A. Design the research experiment by identifying Dependent, Independent and extraneous variables.
- 5B. Suggest methods of measurement and scale of measurement for the dependent and independent variables.
- 5C. What are the probable outcomes of this experiment?

(3+4+3 = 10 marks)

6. **Explain the following briefly:**

- 6A. Relevance Measures of Central tendency in design
- 6B. Hypothesis testing
- 6C. Normal distribution and its relevance
- 6D. Linear regression and its limitations

(10 marks)

