

Total No. of Questions :6]

SEAT No. :

**P4187**

**[5255]-685**

[Total No. of Pages : 2

**M.E. (Computer Engineering)**  
**RESEARCH METHODOLOGY**  
**(2013 Pattern) (Semester - I) (510104)**

*Time : 3 Hours]*

*[Max. Marks : 50*

*Instructions to the candidates:*

- 1) All questions are compulsory.*
- 2) Neat Diagram must be drawn wherever necessary.*
- 3) Figures to the right indicate full marks.*
- 4) Assume suitable data if required.*

**Q1) a)** Choose any problem in computer engineering and state what type of research it is ? What is the objective and motivation of it? Draw work flow of the defined problem. **[8]**

OR

**b)** Briefly describe the different steps involved in a research process. **[8]**

**Q2) a)** Why literature survey is required in research? State and explain the different sources of information. Identify any five journal list in your domain. **[9]**

OR

**b)** What is research problem? Define the main issues which should receive the attention of the researcher in formulating the research problem. Give suitable examples to explain your points. **[9]**

**Q3) a)** Explain the meaning of the following in context of Research design. **[8]**

- i)** Extraneous variables.
- ii)** Confounded relationship.
- iii)** Research hypothesis.
- iv)** Experimental and Control groups.

OR

**b)** Explain the meaning and significance of a Research design. **[8]**

**P.T.O.**

- Q4) a)** Explain the meaning of analysis of variance (ANOVA). Describe briefly the technique of analysis of variance for one way and two way classification. [8]

OR

- b) Explain
- i) Parametric statistics
  - ii) Non-parametric statistics [8]

- Q5) a)** The procedure of testing hypothesis requires researchers to adopt several steps. Describe in brief all such steps. [8]

OR

- b) Define
- i) central tendency,
  - ii) dispersion,
  - iii) skewness ,
  - iv) kurtosis. [8]

- Q6) a)** State in brief layout of research report and what precautions one should take for writing research report. [9]

OR

- b) Why optimization is required in research? List and explain any one Optimization method. [9]

