Total No. of Questions : 6]

SEAT No. :

P4863

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# [5060] - 804
## M.E. (Computer Engineering) (Semester - I)
## RESEARCH METHODOLOGY
## (2013 - Pattern)

*Time : 3 Hours]* *[Max. Marks :50*

***Instructions to the candidates:***

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

***Q1)*** a) Define Research and its motivation. Explain research process in detail. **[9]**

OR

b) What are Intellectual Property rights? Why promote and protect intellectual property? What is a Patent? Why are patents necessary? What kinds of inventions can be Protected? **[9]**

***Q2)*** a) What is research problem? What are the different techniques involved in defining the problem. **[8]**

OR

b) Why Literature survey in research is required? How it is conducted? Write names of top 5 referred journals in your field which are used for literature survey. **[8]**

***Q3)*** a) Explain the following concept relating to research design: **[8]**

i) Dependent and independent variable
ii) Extraneous variable
iii) Research hypothesis
iv) Experimeut

OR

b) Choose any research problem in computer engineering field to conduct the research. State different research designs and select suitable research design method for the problem you identified and justify why you selected that particular design method. **[8]**

***P.T.O.***

***Q4)*** a) Enumerate the different methods of collecting data. Which one is the most suitable for conducting enquiry regarding family welfare program in India? Explain its merits and demerits. **[8]**

OR

b) Explain the use of analysis of variance (ANOVA) and covariance (ANACOVA). Briefly explain multivariate ANOVA. **[8]**

***Q5)*** a) What is the role of statistics in research? Explain important statistical measures that are used to summarize the survey/research data. **[8]**

OR

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

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

OR

b) What is the queuing theory? What is little's law explain its use in queuing theory with suitable examples. **[9]**

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