

Total No. of Questions : 8]

SEAT No. :

P4679

[Total No. of Pages :2

[4860]-621

**M.E. (Water Resource & Environmental Engg.)
Research Methodology and Intellectual Property Rights
(2012 Pattern)**

Time : 3 Hours]

[Maximum Marks : 100

Instructions to the candidates:

- 1) *Attempt any three questions from each section.*
- 2) *Figures to right indicate full marks.*

SECTION - I

- Q1)** a) State and explain the various steps of research process. [8]
b) What is a research design? Explain the objectives of research. Also distinguish between historical and experimental research Write a note on 'Basic principles of experimental designs' [9]
- Q2)** a) Describe in brief the four operations of data processing. [8]
b) Enlist the various data collection methods and discuss the factors affecting their choice. [9]
- Q3)** a) Which are the statistical measures used for data analysis. Describe their significance. [8]
b) What is ANOVA (analysis of variance) test ? In which situation is it useful? [8]
- Q4)** a) What is multiple regression analysis ? When is it used? [8]
b) State and describe various decision making techniques. [8]

SECTION - II

- Q5)** a) How can we use genetic algorithm for decision making? [8]
b) Explain various steps involved in report writing. [9]

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- Q6)** a) State and explain various techniques of interpretation. [8]
b) What is patenting? How are the patents useful to society, business, and individuals? [9]
- Q7)** a) Describe the various steps involved in the process of obtaining patent protection? [8]
b) How can patents be obtained worldwide?. [8]
- Q8)** a) What is the Patent Cooperation Treaty (PCT)? Which are the new developments in IPR? [8]
b) How are geographical indication rights enforced? What is the difference between a geographical indication and a trademark? [8]

