

Total No. of Questions :8]

SEAT No. :

P4051

[Total No. of Pages : 2

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M.E. (Civil) (Water Resource & Environmental Engg.)

RESEARCH METHODOLOGY TREATMENT

(2013 Pattern) (Semeter - I)

Time : 3Hours]

[Max. Marks :50

Instructions to the candidates:

- 1) *Solve any Five questions from Eight questions.*
- 2) *All questions carry equal marks.*
- 3) *Figures to the right indicate full marks.*
- 4) *Use of scientific calculator is allowed.*
- 5) *Assume suitable data, if necessary.*

Q1) a) Explain the errors in selecting a research problem. **[5]**

b) Explain the basic features of a research design. **[5]**

Q2) a) Enlist various Research funding agencies. Discuss about any one in detail. **[5]**

b) With suitable example explain Applied research. **[5]**

Q3) a) Under what circumstances would you recommend:-
i) Convenient Sampling
ii) Multistage Sampling
iii) Quota Sampling **[5]**

b) Discuss the sources of error in measurement. **[5]**

Q4) a) Discuss the graphic rating scale. **[5]**

b) Explain the sources which can and/or should be used for selecting a research problem. **[5]**

P.T.O.

- Q5)** a) Explain the Null hypothesis and Alternative Hypothesis with suitable examples. [5]
b) Write a note on ‘Centroid method of factor analysis’. [5]
- Q6)** a) Write a note on “Two way ANOVA”. [5]
b) Explain Important Non-Parametric tests for Hypothesis testing. [5]
- Q7)** a) Discuss the steps involved in patenting a research idea. [5]
b) What would you cover in introduction of Research Report. [5]
- Q8)** Write a research proposal for a suitable research problem (any problem related to Civil engineering can be considered) to a funding agency with reference to the following terms: Title, Introduction, origin of the problem, expected outcome, literature review, Significance of the study in the context of current status, objectives, methodology, year Wise plan. [10]

