

Total No. of Questions : 8]

SEAT No. :

P3774

[Total No. of Pages : 2

[4760] - 83

M.E. (Civil) (Water Resource and Environmental Engineering)
REMOTE SENSING AND GEOGRAPHICAL INFORMATION
SYSTEM FOR WATER RESOURCES MANAGEMENT
(2008 Pattern) (Elective - II)

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) Answers to the two sections should be written in separate answer books.*
- 2) Neat diagrams must be drawn wherever necessary.*
- 3) Figures to the right side indicate full marks.*
- 4) Use of Calculator is allowed.*
- 5) Assume Suitable data if necessary.*
- 6) All Questions are Compulsory.*

SECTION - I

- Q1)** a) Discuss the principles of photogrammetry and its applications in water resources. **[5]**
b) Write an essay on Fundamentals of Remote Sensing System. **[5]**
c) Write a note on Electromagnetic Spectrum. **[3]**
- Q2)** a) State and Explain the Displacement Law. **[4]**
b) Discuss in detail the interaction of EMR with 'Atmosphere' **[4]**
c) Describe the stages of Remote Sensing with neat sketch. **[3]**
- Q3)** a) Discuss the important advantages of vertical and oblique aerial photographs. **[3]**
b) State the elements of image interpretation in short. **[5]**
c) What are FCC images? Write its advantages. **[5]**
- Q4)** a) Discuss various characters of IR images. **[3]**
b) Discuss the ORTHO rectification method. **[5]**
c) Write a note on Concept of Analog and Digital System. **[5]**

P.T.O.

SECTION - II

- Q5)** a) Describe in brief Geographical information System (GIS). [5]
b) Write in brief the Components of GIS. [5]
c) Discuss in short buffering. [3]
- Q6)** a) What are Map Projections? [4]
b) Write a note on Raster Data Structure. [4]
c) Describe Supervised and unsupervised classification. [3]
- Q7)** a) Describe Spatial and Attribute Database. [3]
b) Discuss Errors in GIS [5]
c) Write an essay on Data collection and input processing in G.I.S. [5]
- Q8)** a) Explain RS application in Open Canal Conduit with flow chart. [3]
b) Write in short the software's used in GIS for Water Resources. [5]
c) Explain in brief 'DEM'. [5]

