Total No. of printed pages = 2

SUBJECT CODE = CEE024103

Roll No. of candidate | | | | | | | | | | |

2017

End Semester M.Tech (Civil Engineering) Examination

1st Semester

REMOTE SENSING FOR LAND AND WATER RESOURCES

Full Marks- 70 Pass Marks- 21 Time- 3 hours

The figures in the margin indicate full marks.

PART A

Q. 1. Answer the following questions: (1×16= 16)

a) The approximate range of colour blue in EMR is-
   i. 0.4-0.5 µm
   ii. 0.1-0.2 µm
   iii. More than 0.7 µm
   iv. None of the above
b) Name the three types of scattering.
c) What is Passive Remote sensing?
d) What is Multi Spectral Scanner?
e) Write the difference between Polar Orbital Satellite & Geo-Stationary Satellite?
f) What is map projection?
g) Give three examples of Geo-Stationary Satellites.
h) What is the height of Geo-Stationary Satellites.
i) $BV_{ijr}+ BV_{ijk}/BV_{iji}$ is the formula for
   i. Low frequency filtering
   ii. High frequency filtering
   iii. Linear edge enhancement
   iv. Ration Functioning
j) Define Linear Contrast Stretch.
k) What is Rectification?
l) FCC stands for_____.
m) What is DBMS?
n) Differentiate between DEM and TIN.
o) What does GCS and PCS stands for?
p) Write two disadvantages of Raster Data Structures.

PART B

Q.2. Answer the following questions: **(7×2= 14)**

a) Describe the components of an ideal Remote Sensing system with schematic diagram.
b) List the different Remote Sensing application related to civil engineering.

PART C

Answer the following questions: **(10×4= 40)**

Q.3. Describe with suitable diagram ENR spectrum used in Remote Sensing.

OR

Explain the energy interaction with atmosphere and earth surface.

Q.4. Describe the type of sensors classified on the basis of application and purposes.

OR

What are different types of Remote Sensing platforms? Give examples.

Q.5. Explain the basic elements of Image Interpretation.

OR

What is Supervised and Unsupervised Classification?

Q.6. Write the application of RS & GIS in detection of Temporal changes in Land & water resource management.

OR

What is GIS and its components? Explain Raster and Vector Data Structure.