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B. Tech. EXAMINATION, May 2017

(Fourth Semester)

(Old Scheme) (Re-appear Only)

(CE)

CE-208

GEOMATIC ENGG.

Time : 3 *Hours*] [*Maximum Marks :* 100

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt any *Five* questions. All questions carry equal marks.

1. (a) A vertical photograph was taken at an altitude of 1200 meters above mean sea

level. Determine the scale of photograph for terrain lying at elevation of 80 meters and 300 m if focal length of camera is 15 cm. **10**

(b) How do you determine the scale of an arial photography ? What do you understand by term 'datum scale' and 'average scale' ? **10**

2. (a) Explain Idealized remote sensing system. **10**

(b) Explain Boltzman and Wien displacement law for thermal emission. **10**

3. (a) Differentiate between Real and Ideal Remote sensing. What is the characteristics of solar radiation ? **10**

(b) What do you understand by spectral reflectance ? Draw spectral reflectance curve for some features like vegetation, earth, soil and urban area and water. **10**

4. Explain the following terms : **20**

(i) CRAB and drift

(ii) Stereoscopy

(iii) Radiometric resolution

(iv) Raster and vector data.

5. What is GIS ? Explain objective of GIS and component of GIS. **20**

6. What is Electromagnetic spectrum ? Explain various electromagnetic spectrum regions and their usage in various remote sensing application. **20**

7. Explain the following terms : **20**

(i) Type of sensors

(ii) Scattering and absorpting

(iii) Atmospheric window

(iv) GPS.

8. Explain usage of remote sensing and GIS in various fields related to Civil Engg. **20**