CE-502(N)

B. E. (Fifth Semester) EXAMINATION, Dec, 2010

ADVANCED SURVEYING CE-592(N)

Time ; Three Hours Maximum Marks: 100

Nole : Attempt one question from each Unit. Assume any suitable if required.

1- (a) Explain the Geodimcter method, with the help of schematic diagram. 10

(b) Describe in detail different types of total stations. 10

2. (a) List the types of surveying work that can be done with

(b) Write short notes an any two of the following : 10

(i) Digital polar plammctcr (ii) Uses of GPS

Unit-II

3.(a) What arc the systems of co-ordinates employed to locate position of a heavenly body. Why it is necessary. 10

(b) Explain any two of the following terms : 5 each

(i) Celestial sphere (if) Sidereal lime (iii) The right ascension (R A) O

4.(a) What are the various methods of determining the longitude in Astronomy ? Explain any two in detail. 10

(b) Find the local apparent time of an observation at a place in longitude 60 18' E. corresponding to local mean time 10th 20th 30. the equation of the time at G. M. N. being 5m 3-45 additive to the mean time and decreasing at the rate of 032 per hour. 10

5.(a) Discuss in detail three segments of the GPS systems. 10

(b) list out the main components of a GPS receiver, and

also explain GPS receivers can be divided into various groups according to different criteria. 10

Or

6 (a) Distinguish between static and kinematic GPS survey. 10

(b) Advantages and current limitations of GPS techniques over conventional surveying techniques. 10

Unit-IV

7. (a) Explain tiny four of the following terms in connection with the Aeriul Survey : 2 each

(i) Photo scale (ii) Till (iii) Height distortion (iv) Photomosaic (v)Stereoscopy

(b) Derive an expression for the height displacement in a vertical photograph. 10 Or

8.(a) How do you determine tl« number of photographs necessary to cover a given area in Arial survey ? 10

(b) A pbotogrammctric survey is carried out to a scale of 1:20.000. A camera with a wide angle lens of = 150 mm was used with 23 cm X 23 cm. Plate size for a net 60% overlap along the line of flight. Find the error in height given by an error of 0-1 mm in measuring the parallax of the point 10

9 (a) Write a detailed note on application of remote sensing.

(b) What are the sensors used in IRS scries ? 10 Or

10.(a) Explain how satellite imagery can be used to estimate population distribution ? 10

(b) What is a GIS ? What are the components of a GIS ? What are the different input methods in to a GIS ? 10