

Roll No

CE-502**B.E. V Semester**

Examination, June 2016

Advanced Surveying*Time : Three Hours**Maximum Marks : 70*

- Note:* i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
 ii) All parts of each question are to be attempted at one place.
 iii) All questions carry equal marks, out of which part A and B (Max. 50 words) carry 2 marks, part C (Max. 100 words) carry 3 marks, part D (Max. 400 words) carry 7 marks.
 iv) Except numericals, Derivation, Design and Drawing etc.

1. a) Define EDM.
 b) Explain digital planimeter.
 c) Discuss digital theodolites.
 d) Discuss the co-ordinate calculation of total station.

OR

What is Global positioning system? Discuss its importance in the event of war.

2. a) Define the Zenith and Nadir.
 b) Explain co-declination and hour angle.
 c) Explain altitude and azimuth system.
 d) Explain the determination of altitude by meridian altitude of sun or star.

OR

Find the local apparent time of an observation at a place in longitude $60^{\circ} 18'E$, corresponding to local mean time $10^h 20^m 30^s$. The equation of time at G.M.N being $5^m 3.45^s$ additive to mean time and decreasing at rate of 0.32^s per hour.

3. a) Explain control segment & user segment.
 b) Discuss elements of satellite.
 c) Discuss generation of DTM on computers.
 d) Write salient features for study of satellite based map.

OR

Write and discuss GPS observation methods also discuss advantages over conventional methods.

4. a) Define Terrestrial photogrammetry.
 b) Define Isocentre and swing.
 c) Discuss scale of vertical photograph for aerial photogrammetry.
 d) Derive the parallel equation for determining heights from a pair of vertical photographs.

OR

How do you determine the scale of an aerial photograph? What do you understand by terms 'datum scale' and 'average scale'?

5. a) Explain classification of remote sensing.
 b) Discuss wave length regions of remote sensing.
 c) Discuss Stefan-Boltzmann and Wien's displacement laws.
 d) Discuss in detail vector dot model.

OR

Discuss various types of observation platforms use in remote sensing in detail.
