

**B.TECH SEM – VI (2007 COURSE) (CIVIL ENGG.) : SUMMER
2018**

SUBJECT: ADVANCED SURVEYING

Day : Friday
Date : 01/06/2018

S-2018-2704

Time : 02.30 PM TO 05.30 PM
Max. Marks : 80

N.B.:

- 1) **Q. No. 1 and Q. No. 5 are COMPULSORY.** Out of remaining attempt ANY TWO questions from each section.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer books.
- 4) Use of non-programmable calculator is **ALLOWED**.
- 5) Draw neat and labeled diagram **WHEREVER** necessary.
- 6) Assume suitable data, if necessary.

SECTION - I

- Q. 1**
- a) Explain with sketches various types of triangulation figures and their suitability. (04)
 - b) Describe the process of ground control survey in photogrammetry. (05)
 - c) What is sounding? Explain use of eco sounder for measurement of soundings. (05)
- Q. 2**
- a) Explain the procedure of adjustment of braced geodetic quadrilateral by approximate method. (06)
 - b) Adjust the following angles closing the horizon: (07)
 $\angle A = 110^{\circ} 20' 43'' - wt 1$
 $\angle B = 92^{\circ} 30' 15'' - wt 2$
 $\angle C = 56^{\circ} 12' 05'' - wt 3$
 $\angle D = 100^{\circ} 57' 06'' - wt 4$
- Q. 3**
- a) Describe the process of flight planning for aerial survey. (06)
 - b) Derive the parallax equation for ground co-ordinates for aerial photos. (07)
- Q. 4**
- a) Explain with neat sketches any three special functions of total station. (06)
 - b) State various methods of locating sounding and explain any one method in detail. (07)

SECTION – II

- Q. 5**
- a) Explain the term atmospheric windows w.r.t. remote sensing. (05)
 - b) Describe the raster data structure in GIS. (05)
 - c) What is DGPS? Explain its working principle. (04)
- Q. 6**
- a) Explain with a neat sketch ideal remote sensing system. (06)
 - b) Describe temporal and spectral resolution in remote sensing. (07)
- Q. 7**
- a) State and explain limitations of GIS. (06)
 - b) Explain the terms query analysis and visualization in GIS. (07)
- Q. 8**
- a) What is access denial techniques in GPS? Explain. (06)
 - b) State various applications of GPS. (07)

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