

Day: Wednesday

Date: 22/05/2019

Time: 02.30 PM TO 05.30 PM

Max. Marks: 80

S-2019-3107

N.B.:

- 1) **Q. No. 1 and Q. No. 5 are COMPULSORY.** Out of the remaining attempt any **TWO** questions from each section.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answer to both the sections should be written in **SAME** Answer book.

SECTION-I

- Q.1** a) Explain with neat sketch various types of Triangulation figures. (05)
b) Define the following terms: (04)
i) Tilted photographs ii) Vertical photographs
c) Explain the process of calibration of total station. (05)
- Q.2** a) What is spherical excess? How it is calculated? (05)
b) Find the most probable values of the angle A, B and C of ΔABC from (08)
following observations using method of differences
A = $65^{\circ} 15' 30''$ – wt. 3
B = $51^{\circ} 11' 25''$ – wt. 2
C = $63^{\circ} 32' 34''$ – wt. 5
- Q.3** a) Distinguish between aerial photographs and Map? (05)
b) A line measures 12cm on photograph with camera having focal length of 22cm. (08)
The same line measure 3cm on map. Drawn to scale 1:50000. Calculate flying
height of aircraft, if the average attitude is 350m.
- Q.4** a) What are various sounding equipment and explain any one in detail. (05)
b) Explain temporary adjustment of total station? (04)
c) Explain the term reduction of sounding. (04)

SECTION-II

- Q.5** a) What are the limitation and application of GIS? (05)
b) Explain active and passive remote sensing. (04)
c) What are the various segment of SBPS? (05)
- Q.6** a) What are the component of GIS? (06)
b) What is GIS? State various GIS software and explain how remote sensing and (07)
GIS are linked.
- Q.7** a) Differentiate between Ideal and Real Remote sensing. (06)
b) What are the element of remote sensing? Explain in details. (07)
- Q.8** a) Enlist the application of SBPS. (06)
b) Differentiate between absolute and differential positioning system. (07)