MAY 2022 - ENDSEM EXAM
T. Y. B. TECH. (CIVIL) (SEMESTER - II)
COURSE NAME: ADVANCED SURVEYING
COURSE CODE: CVUA32181B
(PATTERN 2018)

Time: [1Hour]   [Max. Marks: 30]

(*) Instructions to candidates:
1) Figures to the right indicate full marks.
2) Use of scientific calculator is allowed
3) Use suitable data where ever required

Q.1 a. What are the components of GIS?   [4]
     b. What is GIS. State various GIS software's and explain how   [6]
         remote sensing and GIS are linked.

                                OR

     b. Explain the advantages and disadvantages of Raster data   [6]
         and Vector data.

Q.2 a. Define the following terms: True error, Most probable   [4]
         value, Residual Error, Most probable error.
     b. What is spherical excess? What are the methods of   [6]
         computing the sides of a spherical triangle? Explain any
         one method.

                                OR

     b. The angles of triangle ABC were recorded as follows: [6]
         A = 77°14'20" Weight 4
         B = 49°40'35" Weight 3
         C = 53°04'52" Weight 2
         Find the most probable values of angle A, B, C. Use
         method of correlates.

Q.3 a   Explain the terms Crab and Drift.   [4]
     b   A scale of aerial photograph is 1:10000, effective at an   [6]
         average elevation of terrain of 500m. The size of aerial
         photograph is 230 mm× 230 mm. Focal Length of camera
         is 20 cm. Speed of aircraft is 180 kmph, longitudinal
         overlap is 60% and side overlap is 30%. Determine the
         number of photographs required for the area of 30 km ×
         22.5 km. Also determine the exposure interval and flying
         height.

                                OR

     b   Derive an expression for displacement due to ground   [6]
         relief.