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Question Paper Code: 93106

B.E. / B.Tech DEGREE EXAMINATION, MAY 2022

Third Semester

Civil Engineering

19UCE306 Surveying

(Regulation 2019)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. Surveys which are carried out to depict mountains, rivers, water bodies, wooded areas and other cultural details, are known as _____ CO1- U
(a) Cadastral Surveys (b) City Surveys
(c) Topographical Surveys (d) Plane Surveys
2. What is the least count of Theodolite? CO1- U
(a) 20' (b) 30" (c) 20" (d) 1°
3. Among the classification of triangulation system, which posses the highest order? CO3- U
(a) Primary (b) Secondary (c) Tertiary (d) Quaternary
4. In total station, data is stored in _____ CO5- U
(a) Pen drive (b) Data card (c) Micro processor (d) External hardware
5. Which of the following is not a principle of remote sensing? CO1- U
(a) Interaction of energy with satellite (b) Electromagnetic energy
(c) Electro-magnetic spectrum (d) Interaction of energy with atmosphere

PART – B (5 x 3= 15 Marks)

6. Define Surveying. CO1- U
7. What is the relation between fundamental lines in theodolite? CO1- U
8. Define well conditioned triangle. CO1- U

9. What is meant by EDM? CO1- U
10. What is remote sensing. CO2- App

PART – C (5 x 16= 80 Marks)

11. (a) The following bearings were taken from closed compass traverse CO2- App (16)
- | Line | Fore Bearing | Back Bearing |
|------|--------------|--------------|
| AB | 191° 15' | 10°15' |
| BC | 120°45' | 300° 45' |
| CD | 349° 05' | 169° 00' |
| DE | 339° 35' | 160° 40' |
| EA | 296°00' | 115°00' |
- Find the included angle.
- Or
- (b) The following staff readings were observed successively with a level, the instrument has been moved after third, sixth and eighth readings: 3.185, 3.845, 2.165, 2.645, 2.780, 0.985, 2.645, 0.430, 1.465, 1.570, 0.790, 1.945, 0.650, 1.340, 0.530 meters. Enter the above readings in a page of a level book & calculate the R.L. of points by Rise & Fall method, if the first reading was taken with a staff held on bench mark of 250.000 m. Apply the usual checks. CO2- App (16)
12. (a) Illustrate the methods of measuring horizontal angles by using Theodolite survey. Conclude that which one is most precise method? Justify. CO3- Ana (16)
- Or
- (b) Analyze the principle of stadia tachometry. CO3- Ana (16)
13. (a) Explain various types of curve with neat sketch. CO1- U (16)
- Or
- (b) What is meant by triangulation and briefly explain their types. CO1- U (16)
14. (a) Explain the distinguishing characteristics of Total station. CO4- U (16)
- Or
- (b) Explain about field Applications of GIS. CO4- U (16)
15. (a) List the application of remote sensing. CO5- U (16)
- Or
- (b) Explain in detail photogrammetric surveying. CO5- U (16)