BTCVSS801C Higher Surveying

Question Bank

Module I

1. What is Higher Surveying and its applications?
2. What are the types of sensors used in higher surveying?
3. Enumerate in detail the type of surveys used in higher surveying.
4. What are the pro and cons of higher surveying?
5. What are the fundamental requirements of higher surveying?
6. What are the differences between basic surveying and higher surveying?
7. Explain platform requirements for higher surveying.
8. Describe the connection of basic surveying with higher surveying.
9. What is the scale and resolution of surveying higher surveys?
10. Explain in detail about role of coordinate systems in mapping for Earth surface.

Module II

11. Explain in detail about fundamentals of astronomy.
12. What are the applications of astronomy in higher surveying?
13. Explain in detail about fundamental concepts of error, accuracy, and error propagation.
14. What are applications of error propagation
15. Explain observation equation method of adjustments.
16. Write in detail about Condition Equation Method.
17. Write a short note on Combined Method of adjustments.
18. What are working principles of Global Positioning System (GPS)?
19. What are the applications of Global Positioning System (GPS)?
20. Explain pros and cons of using Global Positioning System (GPS) in higher surveying.

Module III

21. What are the application of photogrammetry in higher surveying?
22. Write a short note on Vertical photogrammetry.
23. Explain stereo photogrammetry in higher surveying.
24. Write a detailed account of Analytical photogrammetry.
25. Explain in detail about Affine mathematical model of photogrammetry.
26. Explain in detail about Conformal and Rational functional model (RFM) mathematical model of photogrammetry.
27. State and explain direct linear transformations.
28. State and explain the photogrammetric products.
29. Explain the process of image matching in photogrammetry.
30. Explain in detail about close range and terrestrial photogrammetry mapping.

Module IV

31. Explain in detail radar image interpretation and its applications.
32. Explain in detail about workings of RADAR system.

33. What are the characteristic features of LiDAR data derived DEM's?
34. Explain detailed account of LiDAR Technique and its applications in higher surveying.
35. What are the major differences between RADAR vs. LiDAR?
36. What are the major differences between Traditional Photogrammetry vs. LiDAR?
37. What are the applications of RADAR from a geoscience perspective?
38. What are the applications of Higher Surveying techniques for Archaeological Surveys?
39. What are the fundamentals of RADAR?
40. Explain the procedure of information extraction from LiDAR data.

Module V

41. What are the fundamental concepts of the hydrographic survey?
42. Explain in detail about field procedures for hydrographic surveying.
43. State and explain modern techniques for hydrographic Survey.
44. What are the applications of Higher Surveying techniques for Cadastral survey and building detection and extraction.
45. What are the applications of Higher Surveying techniques for 3D mapping?
46. Explain the procedure of virtual model development.
47. Explain applications of Higher Surveying techniques for Geomorphological features mapping.
48. What are the applications of Higher Surveying techniques for measurements of surface deformation and plate tectonic movement?
49. Write a short note on compatibility of various Higher Surveying techniques.
50. What are the applications of Higher Surveying techniques for forestry?