CE3351 SURVEYING AND LEVELLING

IMPORTANT QUESTION

UNIT – I FUNDAMENTALS OF CONVENTIONAL SURVEYING

2 – Mark

1. Define Surveying.
2. Name the instruments/accessories needed to carry out a chain surveying
3. Classify surveying based on the instruments used.
4. List the different cumulative errors in chain surveying.
5. Discuss ranging. Mention its types.
6. What is the difference between map and plan
7. What do you mean by geodetic surveying?
8. State the principles of surveying.
9. What is the purpose of an Optical Square?
10. How do you fix a point from the control points?
11. Define Representative Fraction
12. Under what circumstances the reciprocal ranging is used?
13. List out some code of signals used while ranging.
14. Define compensating error.
15. What is meant by well-conditioned triangle?
16. The length of a line measured with a 20m chain was found to be 250 meters. Calculate the length of the line if the chain was 10 cm too long.
17. What do you understand by the term plotting?
18. How will you correct errors in tape which occurs due to change in temperature?
19. What is meant by sag correction?
20. What is traversing?
21. Define compass surveying.
22. What is meant by traverse?
23. Define Meridian.

13 – Mark

1. Describe equipment and accessories for ranging and chaining.
2. Explain well conditioned triangle.
3. Explain chain traversing.
4. Write about System and conversion with long reference.
5. What are the sources of errors and local attraction? Explain.
6. Describe magnetic declination.
7. Discuss compass traversing.
8. Write about plane table and its accessories.

UNIT – II LEVELLING

2 - Mark

1. Define levelling
2. Define Benchmark and give its types.
3. What is meant by Turning Point in Levelling?
4. List the different types of levelling staves.
5. What is meant by M.S.L?
6. Define vertical plane
7. List out the types of levelling instruments.
8. What is meant by R.L?
9. Write about datum.
10. Differentiate between internal focusing telescope and external focusing telescope.
11. What is the difference between tribarch and trivet?
12. Define fore sight
13. Compare simple levelling and differential levelling
14. Distinguish between level line and horizontal line.
15. What is Dumpy level?
16. What is meant by Height of collimation?
17. What is meant by check levelling?
18. Discuss about ball and socket arrangement in level.

19. What is meant by G.T.S benchmarks?
20. List out the methods of levelling.
21. Define back sight.
22. What is reciprocal levelling?
23. Find the correction for curvature for a distance of 2.5 km
24. Define sensitiveness of bubble tube.
25. List out the personal errors in levelling.

13 - Mark

1. The following staff readings were observed successively with a level, the instrument having been moved after third. sixth and eighth readings 2.228,1.606, 0.988, 2.090, 2.864, 1.262, 0.602, 1.982, 1.044, 2.684 meters. Enter the above readings in a page of level book and evaluate the R.L. of points if the first reading was taken with a staff held on a bench mark of 432.384 m.
2. Discuss briefly about the methods of levelling.
3. i) Define Bench mark. Describe the different types of bench marks. (6)

UNIT – III THEODOLITE SURVETING

2 – Mark

1. Write about temporary and permanent adjustments.
2. What is tachometric adjustment?
3. Define stadia tachometry.
4. Discuss tangential tacheometry.
5. Differentiate single plane method, double plan method.

13 – Mark

1. Describe horizontal and vertical angle measurements.
2. Explain tacheometric surveying

3. Explain trigonometric leveling.

UNIT – IV CONTROL SURVEYING AND ADJUSTMENT

2 – Mark

1. Define horizontal and vertical control.
2. What is traversing?
3. State gale's table.
4. Write error propagation and linearization.
5. Define adjustment method.

13 – Mark

1. Describe triangulation.
2. Write the concepts of measurements and errors.
3. Describe least square methods.
4. Explain angles, lengths and leveling network.

Unit – V MODERN SURVEYING

2 – Mark

1. Write total station of modern surveying.
2. What is EDM?
3. Define COGO function.
4. Write field procedure and application.
5. Define system components.
6. What is signal structure?
7. Write the errors in GPS.
8. Define field procedure and application.

13 – Mark

1. Explain the total station of modern surveying.

2. What are the parts and accessories of modern surveying?
3. Describe field procedure and antispoofing receiver components and antenna.
4. Explain planning and data acquisition.
5. Explain data processing.