

# 31033-Surveying I

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## UNIT 1

### PART – A & B

1. Define surveying.
2. Explain the principles of survey.
3. What is station?
4. What is ranging?
5. What is offset?
6. What are the types of ranging?
7. What are the uses of ranging rod?
8. Why cross staff is used in chain surveying?
9. Explain the types of line?
10. Define survey line.
11. Explain the types of offset?
12. Explain the natural and accumulative errors.

### PART – C

1. Briefly explain the classification of surveying.
2. Briefly explain the main divisions of surveying.
3. Explain the field procedure of chain surveying.
4. Explain the types of ranging.
5. Problems on obstacles.
6. Explain the errors in chain surveying.
7. Explain the principles of surveying.
8. Tape corrections formula.

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## UNIT 2

### PART – A & B

1. Define compass surveying.
2. What is meridian?
3. What is bearing?
4. What are the types of bearing?
5. What are the types of meridian?
6. What is whole circle bearing?
7. What is reduced bearing?
8. What is dip?
9. What is declination?
10. What are the errors in compass?
11. What are the function of pivote?

### PART – C

1. Briefly explain the parts and functions of compass.
2. Problems on include angle.
3. Problems on bearing calculation.

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## UNIT 3

### PART – A & B

1. Define leveling.
2. What is level?
3. What are types of level?
4. What is datum?
5. Define bench mark.
6. What is permanent benchmark?
7. Define rise.
8. Define fall.
9. Differentiate the rise and fall.
10. Define GTS bench mark.
11. Explain the laser level.
12. Define level surface?
13. Define plumb line?
14. What is vertical surface?
15. Explain the leveling staff.
16. what is the least count of leveling staff.

### PART – C

1. Briefly explain the parts and functions of level with neat sketch.
2. Briefly explain the types of level.
3. Differentiate the rise and fall method.
4. Explain the types of leveling staff.
5. Problems on rise and fall methods.
6. Problems on missing data entry.
7. Explain the field procedure of leveling.
8. Briefly explain the temporary adjustment of dumpy level.

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## UNIT 4

### PART – A & B

1. What is C/S leveling?
2. Define longitudinal leveling.
3. Define effects of curvature.
4. What is refractive errors?
5. Give the formula for curvature correction.
6. Give the formula for combined correction.
7. What is permanent adjustment of dumpy?

### PART – C

1. Explain the field procedure for C/S leveling.
2. Briefly explain the field procedure for longitudinal leveling.
3. Problems on combined correction.
4. Derive the expression for combined correction.

**UNIT 5**

**PART – A & B**

1. Define contour.
2. What is horizontal control?
3. What is vertical control?
4. Define contour interval.
5. Define direct methods of contour.
6. Expand the term GPS
7. Give the prismoidal and trapezoidal formula.
8. What is contour gradient.
9. Draw the GPS receiver.
10. What are the types of map.
11. What are the uses of contour.

**PART – C**

1. What are the characteristics of contour?
2. Explain the methods of contour.
3. Problems on reservoir capacity calculation.
4. Explain the fundamental of GPS.
5. Explain the procedure and applications of GPS.