

Contents

<i>Preface</i>	v
1. Introduction	1
2. Basic Concepts of Surveying	14
3. Distance Measurements	34
4. Angle Measurements	50
5. Total Station Survey	60
6. Measurement of Magnetic Bearings	77
7. Elevation Measurements	93
8. Tacheometry Survey	122
9. Trigonometrical Levelling	134
10. Contouring	143
11. Curve Surveying	165
12. Traverse Survey	198
13. Triangulation and Trilateration Survey	216
14. Laser-based Modern Surveying Equipment	227
15. Map Projections	247
16. Plane Table Survey	257
17. Global Positioning System (GPS)/ Global Navigation Satellite System (GNSS)	266
18. Ground Penetrating Radar (GPR)	289
19. Aerial Photogrammetry	297
20. Remote Sensing	323
21. Unmanned Aerial Vehicle (UAV)/Drone	398
22. Geographic Information System (GIS)	414
23. Future of Surveying and Geomatics—Are we ready for it?	434
<i>Objective Type Questions</i>	445
<i>References</i>	539
<i>Index</i>	547