



RAILWAY, BRIDGE AND TUNNEL ENGINEERING

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REVISED

Edition : 3rd Revised and Enlarged Edition : 2021
ISBN : 9789385039454
Binding : Paperback
Pages : 688 + 16 = 704
Size (mm) : 235 × 27 × 170
Weight : 870 g



₹ 450.00 BUY

ABOUT THE BOOK

This book aims at presenting the topics of Railway, Bridge and Tunnel Engineering written in a simple manner. The subject-matter is characterized by comprehension as well as methodical and easy-to-follow style. This edition is enhanced by widening its coverage, adding, updating and rearranging its contents. Four new chapters have been added. Plenty of new matter, numerous examples and figures have been added as per the latest syllabus of different universities of India.

The Section I: Railway Engineering is well divided in to *Fifteen chapters* including Introduction ★ Railway Track Gauges ★ Surveys and Alignment of Railway Lines ★ Railway Track, Traction and Stresses ★ Rails ★ Sleepers ★ Ballast ★ Track Fittings ★ Geometric Design of A Track ★ Resistance to Traction ★ Points and Crossings ★ Railway Stations and Yards ★ Signalling and Interlocking ★ Construction and Drainage of Railway Track ★ Maintenance, Accidents and Safety

The Section II: Bridge Engineering is well divided in to *Nine chapters* including Introduction ★ Bridge Foundations ★ Sub-Structures ★ Classification of Bridges ★ Bridge Flooring ★ Bridge Bearings ★ Design of Bridges ★ Construction and Erection Methods of Bridge ★ Testing, Strengthening and Maintenance of Bridges

The Section III: Tunnel Engineering is well divided in to *Eleven chapters* including General Aspects of Tunnelling ★ Alignment of Tunnel ★ Shafts and Portals ★ Tunnelling in Hard Rock ★ Tunnelling in Soft Soil ★ Tunnel Boring Machine ★ New Austrian Tunnelling Method (NATM) [Sequential Excavation Method] ★ Tunnel Lining ★ Lighting, Ventilation and Dust Control in Tunnels ★ Drainage in Tunnels ★ Safety in Tunnel Construction

The Appendix I gives Abbreviated Terms and Appendix II gives six solved examination papers of GTU.

Salient features of this book are:

- * **427 Self-explanatory and neatly drawn sketches;**
- * **84 Illustrative problems;**
- * **65 Important useful tables;**
- * **733 Typical questions at the end of the chapters.**

The text-matter has been arranged systematically according to the curriculum developed by the Gujarat Technological University (G.T.U.) for the Sixth Semester students of Civil Engineering (Subject code: 2160603) and also it should prove to be extremely useful to the Civil Engineering students preparing for the Degree Examinations of all the Indian Universities, Diploma Examinations conducted by various Boards of Technical Education, Certificate Courses as well as for the A.M.I.E., U.P.S.C., G.A.T.E., I.E.S. and other similar competitive and professional examinations. It should also prove great of interest and practical use to the practising professionals.

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