



BRIDGE ENGINEERING



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REVISED
& ENLARGED

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ABOUT THE BOOK

Bridge Engineering is a specialised subject within the discipline of Transportation Engineering, which deals with the concepts of bridge engineering, bridge components, various bridge foundations, various types of bridges, testing, strengthening and maintenance of bridges etc., and much more. In this seventeenth revised and enlarged edition, plenty of new matter and figures have been added as per the latest syllabus of different universities of India moreover the permutation of some of the sporadic matters have been made to collocate the topics in order.

According to new order of chapter sequence, topics of the subject arranged as per following:

Chapter 1 deals with introduction of bridge engineering, importance, history of development of bridges, selection of bridge site, preliminary and final bridge project drawings, choice of bridge types, bridge alignment and many more topics.

Chapter 2 explains bridge components and other parameters such as bridge approaches, requirements of highway bridges, economic span of bridge, afflux, clearance and free board, flood discharge, joints of bridge, river training works, I.R.C. guideline codes etc.

Chapter 3 and **4** discuss in detail various bridge foundations such as spread and pile foundation also caissons and cofferdams respectively.

Chapter 5 gives details about sub-structures such as abutments, piers and wind walls.

Chapter 6 through **10** deal with classification of bridges such as bridges as per material used; position of bridge floor; inter span relations; type of super-structure, etc.

Chapter 11 through **13** deal with low cost bridges such as movable-span bridges, culverts and causeways and timber or temporary bridges.

Chapter 14 discusses the miscellaneous types of bridges.

Chapter 15 elaborates design loads and stresses on bridges.

Chapter 16 elucidates the topics on bridge flooring.

Chapter 17 focuses on bridge bearings.

Chapter 18 discusses construction and erection of bridges.

Chapter 19 deals with testing, strengthening and maintenance of bridges.

Appendix highlights some of the marvellous bridges of the world.

The book is divided into nineteen well-arranged chapters: therein it contains —

- * 227 Self-explanatory and neatly drawn sketches;
- * 10 Illustrative problems;
- * 23 Important useful tables;
- * 294 Typical questions at the end of the chapters.

The book 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 of interest to the practising professionals.

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