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For I and II Semesters of B. Tech. and Diploma Courses

B.S. Grewal

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Elementary Engineering Mathematics

(for I & II Semesters of B.Tech. & Diploma Courses-

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Preface to the Fifteenth Edition

The book has been thoroughly revised and a number of sections have been rewritten. Some elementary topics have been included to meet the requirement of beginers in engineering studies deleting some sections of lesser utility. A variety of new illustrative examples and problems selected from various examination papers which sharpen ones skill to use various methods, have been added. The list of 'Objective Type of Questions' appended to each chapter, has also been updated. It is hoped that the book in its revised form will serve a move useful purpose.

The authors take this opportunity to thank fellow professors for their suggestions and patronage of the book. In particular, they are grateful to Prof. B.K. Yadav, Chouksey Engg. College, Bilaspur (C.G.); Dr. Jeevragi Phakirappa, RBYM Engg. College, Bellary (Kar.); Prof. Pankaj Kumar, Lovely Professional Univ., Phagwara (Pb.); Dr. Hemant Kumar Nashine, Disha Inst. of Management & Technology, Raipur (C.G.); Prof. Amarapu Ramesh Babu, A.N. Inst. of Science & Technology, Visakhapatnam; Prof. Pankaj S. Gholap, Dr. D.Y. Patel School of Engg., Lohegaon, Pune; Prof. P.C. Pillai, NSS College of Engg., (Ker.); Dr. A.P. Burnwal, R.I.T., Koderma (Jh. K.) and Dr. Saroj Panigrahi, J.P. Inst. of Engg. & Tech., Guna (MP).

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New Delhi

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Note : The references given alongside the problems pertain to the various **Engineering Examinations** of the various universities and professional bodies. The abbreviations used for some of these are given below :

Andhra	stands for	Andhra University, Waltair
Anna	"	Anna University, Chennai
Bhopal	22	Rajiv Gandhi Technical University, Bhopal
B.P.T.U.	"	Biju Patnaik Technical University, Rourkela
C.S.V.T.U.	22	Swami Vivekanand Technical University, Chhatisgarh
Coimbatore	"	Bharathiyar University, Coimbatore
Delhi	22	Guru Gobind Singh Indraprastha University, Delhi
D.T.U.	"	Delhi Technical University
J.N.T.U.	22	Jawahar Lal Nehru Technological University, Hyderabad
Kottayam	"	Mahatama Gandhi Memorial University, Kottayam
Kurukshetra	"	National Institute of Technology, Kurukshetra
Madurai	"	Madurai Kamaraj University, Madurai
Marathwada	"	B.A.M. University, Aurangabad
P.T.U.	"	Punjab Technical University, Jalandhar
Rohtak	"	Maharishi Dayanand University, Rohtak
Tirupati	"	Sri Venkateswara University, Tirupati
<i>U.P.T.U</i> .	"	UP Technical University, Lucknow
U.T.U.	"	Uttarakhand Technical University, Dehradun
<i>V.T.U.</i>	"	Visveswaraiah Technological University, Belgaum
W.B.T.U.	22	West Bengal University of Technology, Kolkata

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