

Faculty Authors Textbook on Graph Theory: Contributing to Mathematics Education Through Scholarly Publication



The **Department of Humanities and Sciences** is delighted to congratulate **Dr. K. Gayathri Devi**, Associate Professor of Mathematics, on the publication of the textbook title "**A Textbook of Graph Theory and Applications.**" The book has been published by **BR Publications** in collaboration with **Dr. P. Nedumaran, Mr. Bairy Mahender, and Dr. B. K. Singh**, reflecting a significant academic contribution to the field of mathematics.

The textbook has been designed to provide students and educators with a comprehensive understanding of **Graph Theory** and its practical applications. It presents fundamental concepts in a clear and systematic manner while incorporating contemporary topics and real-world examples that help learners develop analytical and problem-solving skills. The book serves as a valuable resource for undergraduate and postgraduate students pursuing Mathematics, Computer Science, Engineering, and related disciplines.

The publication of this textbook reflects Dr. K. Gayathri Devi's dedication to academic excellence, quality teaching, and scholarly research. By contributing to educational literature, she continues to support student learning and promote the dissemination of knowledge beyond the classroom. Such scholarly achievements strengthen the institution's academic reputation while inspiring both faculty members and students to pursue research, innovation, and lifelong learning.

The Management, Principal, faculty members, staff, and students extend their heartfelt congratulations to **Dr. K. Gayathri Devi** on this remarkable accomplishment. We wish her continued success in her future academic and research endeavours and look forward to many more valuable contributions to the field of mathematics and higher education.

A Textbook of **Graph Theory and Applications**



Dr. P. Nedumaran
is an Assistant Professor of Mathematics with a specialization in Graph Theory and Networking. He has made significant academic contributions through the publication of numerous research papers in both national and international journals. With a strong commitment to teaching and research, Dr. Nedumaran has been recognized for his excellence in education. He has received prestigious honors such as the Best Teacher Award and Best Faculty Award for his outstanding performance and dedication to student development. His areas of interest include advanced graph theory, fuzzy analysis, computer networking and programming and their practical applications in modern computational systems. Dr. Nedumaran continues to inspire students and contribute to the academic community through his research and teaching.



Dr. K. Gayathri Devi
is an Assistant Professor of Mathematics at PVVK Institute of Technology with over 17 years of teaching experience. She earned her Ph.D. in Applied Mathematics from Sri Krishna Devaraya University in 2015. Her teaching expertise includes Differential Equations, Vector Calculus, Probability and Statistics, Complex Variables, and Engineering Mathematics. Her research interests include Applied Mathematics, Mathematical Modelling, Computational Mathematics, Graph Theory, Artificial Intelligence, and Quantum Theory. She is committed to Outcome-Based Education (OBE), ICT-enabled teaching, and student-centered learning. Dr. Gayathri Devi actively contributes to curriculum development, academic administration, and student mentoring. She regularly participates in Faculty Development Programmes, workshops, seminars, and conferences to enhance her research and teaching skills. She is dedicated to promoting innovative, research-oriented, and application-focused mathematics education.



Mr. Baiyy Mahender
received his B. Tech and M.Tech in Computer Science & Engineering Degree from Jawahar Institute of Technological University Hyderabad (JNTUH). He is currently pursuing Ph.D. at Anna's University, Chittoor, Tamil Nadu, India. He is presently working as an Assistant Professor in the Department of Computer Science at CMR Engineering College (Autonomous), Hyderabad, Telangana, India, a reputed institution known for its excellence in technical education. He has more than 11 years of teaching experience at the undergraduate level. His research interests include Data Mining, Image Processing, Cloud Computing, Internet of Things (IoT), Machine Learning, and Artificial Intelligence. He has published more than three research articles in various reputed international journals and conference proceedings indexed in Scopus and IEEE, as well as UGC-recognized journals. He is actively involved in academic, research, and professional activities, contributing to the advancement of emerging technologies and innovative teaching methodologies in the field of Computer Science and Engineering.



Dr. B. K. Singh
M.Sc., Ph.D. (Statistics) & M.S.S.A. is currently working as a Professor in the Department of Mathematics and Director & Dean, School of Sciences, IFM University, Moradabad, U.P., India. He has more than 32 years of teaching experience. He has more than 18 years experience in the field of research. His research interests are First-Order, Operational Research, Numerical Analysis and Mathematical Modelling. He has Published and presented about 65 research papers in reputed national international journals and conferences in the area of Linear algebra, Mathematical modelling, Queueing Theory, Number Theory and Theory of Group. One of the research paper has been selected as the best paper by American Mathematical Society, M.J.P. Robinson University, Barabati, U.P., conferred him a Ph.D. degree in Mathematics. More than nine Ph.D. awarded on the said field till now. He has taught many topics for the U.G. and P.G. students at different affiliated colleges. He has several research papers, patents and chapters published in the areas of Mathematical Modelling, Mathematical Statistics, and Queueing Theory in many journals of repute. He has also published more than six books on different topics of Mathematics. He is a life time member of many national and international academic and professional bodies.

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