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Notice for the PhD Viva Voce Examination

Mr Gokul S Jayakumar (Registration Number: 2071502), PhD scholar at the School of Sciences, CHRIST (Deemed to be University), Bangalore will defend his PhD thesis at the public viva-voce examination on Friday, 12 July 2024 at 10.00 am in Room No. 044, Ground Floor, R & D Block, CHRIST (Deemed to be University), Bengaluru - 560029.

Title of the Thesis	:	**A Study on Regular Perfect Graphs**
Discipline	:	**Mathematics**
External Examiner (Outside Karnataka)	:	**Dr Seema Varghese** Associate Professor Department of Mathematics Government Engineering College Thrissur – 680009 Kerala
External Examiner (Within Karnataka)	:	**Dr A Senthil Thilak** Associate Professor Department of Mathematical & Computational Sciences National Institute of Technology Surathkal, Mangalore - 575025 Karnataka
Supervisor	:	**Dr Sangeetha Shathish** Assistant Professor Department of Mathematics School of Sciences CHRIST (Deemed to be University) Bengaluru-560029 Karnataka

The members of the Research Advisory Committee of the Scholar, the faculty members of the Department and the School, interested experts and research scholars of all the branches of research are cordially invited to attend this open viva-voce examination.

Registrar

Place: Bengaluru
Date: 04 July 2024

ABSTRACT

The present study introduces a few new variations of perfect graphs. The study initially conceptualises induced cycle perfect graphs by replacing cliques with induced cycles in perfect graphs. The work is then extended to explore C-perfection for a few product graphs, and a characterisation is obtained for each such C-perfect, product graph. Through this study the notion of C-perfect graphs, which deals with induced cycle perfection, has been extended to all possible cycles in a graph G, hence giving rise to the topic C-perfect graphs. The study also conceptualises the concept of induced regular perfect graphs, and regular perfect graphs, and also characterise them. The work on regular perfection is further extended by introducing, and characterising the strongly R-perfect graphs.

Keywords: Perfect graphs, F-perfect graps, cycle perfect graphs, regular graphs, graph minors, forbidden classes, subdivision of graphs, product of graphs.

Publications:

1. Jayakumar, G. S. and Sangeetha, V.: "Induced Regular Perfect Graphs", South East Asian J. of Mathematics and Mathematical Sciences, 21(3), 2023, pp. 379-394, ISSN: 2582-0850, DOI: 10.56827/SEAJMMS.2023.1903.xy.
2. Jayakumar, G. S. and Sangeetha, V.: "C-perfect graphs", TWMS J. App. and Eng. Math., Special Issue, No.1, 2023, pp. 546-556.
3. Jayakumar, G. S. and Sangeetha, V.: "On C-perfection of tensor product of graphs", Springer book series, Lecture Notes in Networks and Systems, 2023.
4. Jayakumar, G. S. and Sangeetha, V.: "On C-perfection of modular product of graphs", Springer book series, Springer Proceedings in Mathematics and Statistics, 2023.
5. Jayakumar, G. S. and Sangeetha, V.: "On C-perfection of cartesian product and lexicographic product of graphs", Adv Appl Math Sci., 21 (8), 2022, pp. 4253-4263.