UNIVERSITY OF MYSORE

Estd. 1916

**Vishwavidyanilaya Karyasoudha
Crawford Hall, Mysuru- 570 005**

No.AC.2(S)/384/14-15

Dated: 28.05.2016

01-6

NOTIFICATION

Sub: Minor modifications in existing soft core "Graph Theory" of First Semester is proposed to III semester from the Academic Year 2016-17.

Ref: 1. Decision of the Faculty of Science & Technology Meeting held on 16.02.2016.

2. Decision of the Academic Council meeting held on 29-03-2016.

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The Board of Studies in Mathematics (PG) which met on 9-11-2015 has resolved to Minor modifications in existing soft core "Graph Theory" of I semester is proposed to III semester. M. Sc. Mathematics. (PG) as follows from the academic year 2016-17.

III Semester M. Sc Mathematics Soft Core Syllabus

Course Title: **Graph Theory**   Teaching Hours: 5/week

Unit 1. Graphs

Types of Graphs, Walks and connectedness, Degrees, Extremal graphs, Intersection graph, Operations on graphs.

Unit 2. Blocks

Cut points, Bridges and Blocks, Block graphs and Cut point graphs.

Unit 3. Trees and Partitions

Characterization of trees, Centers and Centroids, Spanning trees, Partitions

Unit 4. Connectivity and Coverings

Connectivity and line-connectivity, Menger's theorem, Coverings and Independence, Critical points and lines.
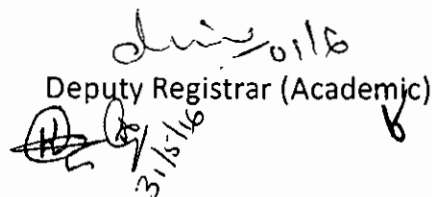
Books for Reference:

1. F. Harary – Graph Theory, Addition Wesley Reading Mass, 1969.
2. N. Deo – Graph Theory With Applications to Engineering and Computer Science, Prentice Hall of India, 1987.
3. K. R. Parthasarathy – Basic Graph Theory, Tata McGraw-Hill, New Delhi,1994.

4. G. Chartand and L. Lesniak – Graphs and Diagraphs, Qwadsworth and Brooks, 2nd Ed.,

5. Clark and D. A. Holton – A First Look at Graph Theory, Allied publishers.

6. D. B. West – Introduction to Graph Theory, Pearson Education Inc., 2001, 2nd Ed.,

7. J. A. Bondy and U. S. R. Murthy – Graph Theory with applications, Elsevier, 1976.

The Faculty of Science and Technology and the Academic Council at their Meetings held on 16.02.2016 and 29.03.2016 respectively have also approved the above said proposal and the same is hereby notified.

| Draft approved by the Registrar |

Deputy Registrar (Academic)

To:

1) The Dean, Faculty of Science & Technology, DOS in Earth Science, Manasagangotri, Mysore.

2) The Chairperson, Board of Studies in Mathematics, Manasagangotri, Mysore.

3) The Chairperson, Department of Studies in Mathematics, Manasagangotri, Mysore.

4) The Director, College Development Council, University of Mysore, Mysore.

5) The Principals of the Affiliated Colleges where running PG Programme in Mathematics.

6) The Coordinator, Directorate of Online & Outreach Programme, Parakalamatta, Manasagangotri, Mysore.

7) The Deputy/Assistant Registrar/Superintendent, Academic Section, Administration Branch, University of Mysore, Mysore.

8) The Deputy/Assistant Registrar/Superintendent, Examination Branch, University of Mysore, Mysore.

9) The P.A. to the Vice-Chancellor/Registrar/Registrar(Evaluation), UOM., Mysore.

10) Office file

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3. B. C. Berndt, *Ramanujan's Notebooks*, Part III, Springer-Verlag, New York, 1991.

4. G. Gasper and M. Rahman, *On Basic Hypergeometric Series, Second Ed.*, Encycl. Math. Applics., Vol 35, Cambridge University Press, Cambridge, 2004.

5. B. C. Berndt, *Number Theory in the Spirit of Ramonujan*, American Mathematical Society, Providence, RI 2006.

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