

ABDUS SALAM SCHOOL OF MATHEMATICAL SCIENCES.  
DIPLOMA FOR ACADEMIC EXCELLENCE IN MATHEMATICS.

**DISCRETE MATHEMATICS  
COMBINATORICS and GRAPH THEORY**

In the period March 8th-March 20th 2010, the second series of lectures in Discrete Mathematics in the frame of Diploma for Academic Excellence in Mathematics will be organized by ASSMS, GCU Lahore. All details regarding this program can be studied in the previous announcement (this website). Next, we present the lectures and the program of the second session. These lectures are basically extensions of the lectures given during the first session.

PROGRAM of the SECOND SESSION, 8-20 March 2010

- Lecture 1. Dr. Tudor Zamfirescu.** Monday, March 8.  
Point wise colorings.
- Lecture 2. Dr. Ioan Tomescu.** Tuesday, March 9.  
Characterizations of 2-connected graphs.
- Lecture 3. Dr. Ioan Tomescu.** Wednesday, March 10.  
Elements of algebraic graph theory: graph spectrum and Hoffman's theorem about connected regular graphs.
- Lecture 4. Dr. Mircea Becheanu.** Thursday, March 11.  
Generating functions. Fibonacci and Catalan numbers in counting problems.
- Lecture 5. Dr. Ioan Tomescu.** Friday, March 12.  
Turan's theorem, Zarankiewicz theorem and applications.
- Lecture 6. Dr. Mircea Becheanu.** Saturday, March 13.  
Partitions of a positive integer and their generating function. Applications in group theory.
- Lecture 7. Dr. Mircea Becheanu.** Monday, March 15.  
Polya enumeration theory..
- Lecture 8. Dr. Mahmood Qureshi.** Tuesday, March 16.  
Planar hamiltonian graphs. Grinberg criterion.
- Lecture 9. Dr. Mircea Becheanu.** Wednesday, March 17.  
Sequences and partial orders. The Erdős-Szekeres theorem.
- Lecture 10. Dr. Mahmood Qureshi.** Thursady, March 18.  
Halin graphs I.
- Lecture 11. Dr. Mahmood Qureshi.** Friday, March 19.  
Halin graphs II.
- Lecture 12. Saturday, March 20. Final examination. Awarding of Diplomas for Academic Excellence.**