



**International Islamic University,**

**Islamabad**

**FACULTY OF BASIC AND APPLIED SCIENCES**

---

## **Ph.D. Mathematics Admission Test**

**Max. Time: 90 Minutes**

**50 MCQs from the following subjects and all to attempt:**

- Q.No.1. Advanced Mathematical Analysis
- Q.No.2. Advanced Partial Differential Equation
- Q.No.3. Advanced Integral Equations
- Q.No.4. Advanced Linear Algebra
- Q.No.5. Real Analysis-I
- Q.No.6. Group Theory.
- Q.No.7. Ordinary Differential Equations
- Q.No.8. Differential Geometry-I
- Q.No.9. Complex Analysis
- Q.No.10. Linear Algebra
- Q.No.11. Set Topology
- Q.No.12. Real Analysis-II
- Q.No.13. Partial Differential Equations
- Q.No.14. Functional Analysis-I
- Q.No.15. Analytical Mechanics
- Q.No.16. Numerical Methods

**Some questions as example:**

Q.No. 1. If  $b^2 - 4ac < 0$ , then the second order linear partial differential equation is

- a) elliptic   b) hyperbolic   c) parabolic   d) all of these   e) none of these

Q.No. 2. Every cyclic group is

- a) of prime order   b) is of composite order   c) is abelian   d) is non abelian  
e) is decomposable

Q.No.3. Every bounded below and increasing sequence is

- a) convergent   b) divergent   c) neither convergent nor divergent  
d) May be convergent and may be divergent   e) none of these