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| Dr. Rajni Kanwar  Assistant Professor  Department of Mathematics  Kalindi College  University of Delhi  Delhi- 110008  Mobile: 7607401426  **E- mail**: rajnikanwar@kalindi.du.ac.in | |  | **Marks Distribution** | **Theory** - 90 |
| **Internal Assessment- 30**  **Tutorial – 40** |
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|
| **Classes Assigned** | **Lectures: 1 per week** |
|  | **References** | **1.** Burnside, W.S., & Panton, A.W. (1979). The Theory of Equations (11th ed.). Vol. 1. Dover Publications, Inc. (4th Indian reprint. S. Chand & Co. New Delhi).  **2.** Dickson, Leonard Eugene (2009). First Course in the Theory of Equations. John Wiley & Sons, Inc. The Project Gutenberg eBook: http://www.gutenberg.org/ebooks/29785 | | |
|  | **Week** | **Topics** | | |
|  | **1st week** | General properties polynomials and equations | | |
|  | **2nd week** | Practice of questions based on Polynomials and equations | | |
|  | **3rd week** | Fundamental Theorem on Algebra and its consequences | | |
|  | **4th week** | Theorem on imaginary, integral and rational roots | | |
|  | **5th week** | Practice of questions based on imaginary, integral and rational roots | | |
|  | **6th week** | Descartes’ rule of signs for positive and negative roots and solving questions based on them | | |
|  | **7th week** | Relation between the root and the coefficients of equations | | |
|  | **8th week** | Class Test | | |
|  | **9th week** | Applications to solution of equations when an additional relation among the roots is given | | |
|  | **10th week** | Practice of questions based on Applications to solution of equations when an additional relation among the roots is given | | |
|  | **11th week** | De Moivre’s theorem for rational indices | | |
|  | **12th week** | Practice of questions based on De Moivre’s theorem for rational indices | | |
|  | **13th week** | the nth roots of unity and symmetries of the solutions | | |
|  | **14th week** | Practice of questions based on the nth roots of unity and symmetries of the solutions | | |
|  | **15th week** | **Class Test** | | |

**Curriculum Plan: B.A. (Prog.) Mathematics (Semester VI)- Graph Theory 2024-25 Even Sem**