MATHEMATICS DEPARTMENT

SESSION-(2019-20) WEEKLY TEACHING PLAN

Prof. Pratibha Saini, Prof. Dalvinder singh, Prof. Kirti Bhagirath,

Class-B.Sc/B.A(sem 5)

| Weeks | PAPER-1 Algebra1 | PAPER-2 DISCRETE MATHS 1 | PAPER-3 MATHEMATICAL METHODS |
|-------|---------------------------------------|-------------------------------------|-------------------------------------|
| 1 | Groups , subgroups and cyclic groups | Set theory | Fourier series |
| 2 | Groups , subgroups and cyclic groups | Relations | Fourier series |
| 3 | Groups , subgroups and cyclic groups | Relations ,Functions | Beta and gamma functions |
| 4 | Normal and quotient groups | Logic and quantifiers | Beta and gamma functions |
| 5 | Normal and quotient groups | Permutations and combinations | Beta and gamma functions |
| 6 | Homorphisms | Permutations and combinations | Laplace transformations |
| 7 | Rings | Pigeonhole principle | Laplace transformations |
| 8 | Subrings , Ideals , Quotient Rings | Mathematical induction | Inverse laplace transformation |
| 9 | Subrings , Ideals , Quotient Rings | Inclusion-exclusion principle | Inverse laplace transformation |
| 10 | Homorphisms of rings | lattices | Inverse laplace . transformation |
| 11 | Homorphisms of rings | Graph theory, trees | Revision |
| 12 | Fields | Finite state machines and languages | Convolution theorm |
| 13 | PID, Euclidean rings | Probability | Convolution theorm |
| 14 | Revision | Revision | Revision |

Principal Govt. College Ropar PRATIBHA SAINI Head of Department

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SESSION-(2019-20) WEEKLY TEACHING PLAN

Prof. Pratibha Saini, Prof.Dalvindersingh, Prof.Kirti

Class-B.Sc/B.A(sem 6)

| Weeks | PAPER-1 Algebra 2 | PAPER-2 DISCRETE METHODS 2 | PAPER-3 MATHEMATICAL METHODS 2 |
|-------|---------------------------------------|-----------------------------------|---|
| 1 | Vector spaces | Analysis of algorithms | Dirichlet's conditions, Fourier transformation |
| 2 | Vector spaces | Discrete numeric functions | Linear Property, Modulation Theorem, Change of scale Property |
| 3 | Basis and dimension | Recurring relations | Shifting theorem, Convolution theorem |
| 4 | Quotient spaces | Homogeneous solutions | Finite Fourier sine transform, cosine transform |
| 5 | Quotient spaces | Group Theory | Finite Fourier cosine transform |
| 6 | Linear transformations | Ring Theory | Application of Laplace transform |
| 7 | Linear transformations & matrices | Boolean Algebra | Application of Laplace transform |
| 8 | Linear transformations & matrices | Boolean Algebra | Application of Laplace transform |
| 9 | Characteristic and minimal polynomial | Duality | Simultaneous ordinary differential equation |
| 10 | Characteristic and minimal polynomial | Boolean functions and expressions | Second order partial differential equation |
| 11 | Eigen value | Digital Networks | Second order partial differential equation |
| 12 | Eigen vector | Digital Networks | Second order partial differential equation |
| 12 | MST | MST | MST |
| 13 | Revision | Revision | Revision |
| 14 | Revision | Revision | Revision |

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