

Name: **Dr. Vandana Gupta**
 Class and Section: **B.A. /B.Sc IVth Sem**
 Subject: **Special functions and integral transforms/Programming in C & numerical methods**

| Week | Date | Topic |
|----------|-----------|--|
| 1 | 1-Jan-18 | Series solution of differential equations – Power series method |
| | 2-Jan-18 | -do- |
| | 3-Jan-18 | Definitions of Beta and Gamma functions. |
| | 4-Jan-18 | -do- |
| | 5-Jan-18 | Guru Gobind Singh Jayanati |
| | 6-Jan-18 | -do- |
| | 7-Jan-18 | Sunday |
| 2 | 8-Jan-18 | Bessel equation and its solution: Bessel functions and their properties, Convergence, recurrence |
| | 9-Jan-18 | -do- |
| | 10-Jan-18 | -do- |
| | 11-Jan-18 | -do- |
| | 12-Jan-18 | Clairaut's equations |
| | 13-Jan-18 | -do- |
| | 14-Jan-18 | Sunday |
| 3 | 15-Jan-18 | Relations and generating functions, Orthogonality of Bessel functions. |
| | 16-Jan-18 | -do- |
| | 17-Jan-18 | -do- |
| | 18-Jan-18 | -do- |
| | 19-Jan-18 | -do- |
| | 20-Jan-18 | -do- |
| | 21-Jan-18 | Sunday |
| 4 | 22-Jan-18 | Basant Panchami |
| | 23-Jan-18 | Legendre and Hermite differentials equations and their solutions: Legendre and Hermite functions and their properties-Recurrence Relations and generating functions. |
| | 24-Jan-18 | Sir Chhotu Ram Jayanti |
| | 25-Jan-18 | -do- |
| | 26-Jan-18 | Republic Day |
| | 27-Jan-18 | -do- |
| | 28-Jan-18 | Sunday |
| 5 | 29-Jan-18 | -do- |
| | 30-Jan-18 | -do- |
| | 31-Jan-18 | Guru Ravidas Jayanti |

| Week | Date | Topic |
|----------|-----------|---|
| 1 | 1-Feb-18 | Orthogonality of Legendre and Hermite polynomials. |
| | 2-Feb-18 | -do- |
| | 3-Feb-18 | -do- |
| | 4-Feb-18 | Sunday |
| 2 | 5-Feb-18 | Rodrigues' Formula for Legendre & Hermite Polynomials |
| | 6-Feb-18 | -do- |
| | 7-Feb-18 | -do- |
| | 8-Feb-18 | -do- |
| | 9-Feb-18 | -do- |
| | 10-Feb-18 | Maharishi Dayanand Saraswati Jayanti |

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| | 11-Feb-18 | Sunday |
| 3 | 12-Feb-18 | Laplace Integral Representation of Legendre polynomial. |
| | 13-Feb-18 | Mahashivratri |
| | 14-Feb-18 | -do- |
| | 15-Feb-18 | Laplace Transforms – Existence theorem for Laplace transforms, Linearity of the Laplace transforms, Shifting theorems, Laplace transforms of derivatives and integrals, |
| | 16-Feb-18 | -do- |
| | 17-Feb-18 | Differentiation and integration of Laplace transforms, Convolution theorem |
| | 18-Feb-18 | Sunday |
| 4 | 19-Feb-18 | -do- |
| | 20-Feb-18 | Inverse Laplace transforms, convolution theorem, Inverse Laplace transforms of derivatives and integrals |
| | 21-Feb-18 | -do- |
| | 22-Feb-18 | Solution of ordinary differential equations using Laplace transform |
| | 23-Feb-18 | -do- |
| | 24-Feb-18 | -do- |
| | 25-Feb-18 | Sunday |
| 5 | 26-Feb-18 | Fourier transforms: Linearity property, Shifting, Modulation, Convolution Theorem |
| | 27-Feb-18 | -do- |
| | 28-Feb-18 | University Holidays |

| Week | Date | Topic |
|-------------|-------------|---|
| 1 | 1-Mar-18 | University Holidays |
| | 2-Mar-18 | University Holidays |
| | 3-Mar-18 | University Holidays |
| | 4-Mar-18 | University Holidays/Sunday |
| 2 | 5-Mar-18 | Fourier Transform of Derivatives, Relations between Fourier transform and Laplace transform |
| | 6-Mar-18 | -do- |
| | 7-Mar-18 | Parseval's identity for Fourier transforms |
| | 8-Mar-18 | -do- |
| | 9-Mar-18 | Sessional |
| | 10-Mar-18 | -do- |
| | 11-Mar-18 | Sunday |
| 3 | 12-Mar-18 | Solution of differential Equations using Fourier Transforms. |
| | 13-Mar-18 | -do- |
| | 14-Mar-18 | -do- |
| | 15-Mar-18 | -do- |
| | 16-Mar-18 | -do- |
| | 17-Mar-18 | -do- |
| | 18-Mar-18 | Sunday |

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| 4 | 19-Mar-18 | Programmer's model of a computer, Algorithms, Flow charts |
| | 20-Mar-18 | -do- |
| | 21-Mar-18 | -do- |
| | 22-Mar-18 | -do- |
| | 23-Mar-18 | Shahidi diwas of Bhagat Singh |
| | 24-Mar-18 | -do- |
| | 25-Mar-18 | Sunday |
| 5 | 26-Mar-18 | Data types, Operators and expressions |
| | 27-Mar-18 | -do- |
| | 28-Mar-18 | -do- |
| | 29-Mar-18 | Mahavir Jayanti |
| | 30-Mar-18 | -do- |
| | 31-Mar-18 | -do- |

| Week | Date | Topic |
|-----------|-----------|---|
| | 1-Apr-18 | Sunday |
| | 2-Apr-18 | Input / outputs functions. |
| | 3-Apr-18 | -do- |
| | 4-Apr-18 | -do- |
| | 5-Apr-18 | -do- |
| | 6-Apr-18 | -do- |
| | 7-Apr-18 | -do- |
| | 8-Apr-18 | Sunday |
| | 2 | 9-Apr-18 |
| 10-Apr-18 | | -do- |
| 11-Apr-18 | | -do- |
| 12-Apr-18 | | -do- |
| 13-Apr-18 | | -do- |
| 14-Apr-18 | | Dr. Amedekar Jayanti and Vaisakhi |
| 15-Apr-18 | | Sunday |
| 3 | 16-Apr-18 | -do- |
| | 17-Apr-18 | -do- |
| | 18-Apr-18 | Parshuram Jayanti |
| | 19-Apr-18 | Implementation of Loops, Switch Statement & Case control structures |
| | 20-Apr-18 | -do- |
| | 21-Apr-18 | -do- |
| | 22-Apr-18 | Sunday |
| 4 | 23-Apr-18 | -do- |
| | 24-Apr-18 | -do- |
| | 25-Apr-18 | . Functions, Preprocessors and Arrays. |

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| | 26-Apr-18 | -do- |
| | 27-Apr-18 | -do- |
| | 28-Apr-18 | -do- |