lesson Plan

Name : Dr. (Mrs.) Alka Gupta (Principal)

Subject: Mathematics

Lesson Plan: January 2018 – April 2018

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| Week | Date | **B.A. 4th Sem (Programming in C & Numerical Methods / Special Functions and Integral Transforms)** |  |  |  |
| 1 | 1-Jan-18 | Variation of sign, Descarte’s rule of sign |  |  |  |
| 2-Jan-18 | Finding the location of roots |  |  |  |
| 3-Jan-18 | Solution of algebraic and transcendental equation |  |  |  |
| 4-Jan-18 | Bisection method |  |  |  |
| 5-Jan-18 | **Guru Gobind Singh’s Birthday** |  |  |  |
| 6-Jan-18 | Definition of power series, centre and convergence of Power series |  |  |  |
| 7-Jan-18 | **Sunday** |
| 2 | 8-Jan-18 | Examples based on Bisection method |  |  |  |
| 9-Jan-18 | Exercise questions based on Bisection method |  |  |  |
| 10-Jan-18 | Clarification of doubts |  |  |  |
| 11-Jan-18 | Regula – Falsi method |  |  |  |
| 12-Jan-18 | Interval of convergence and radius of convergence of Power series |  |  |  |
| 13-Jan-18 | Numericals based on radius of convergence of power series |  |  |  |
| 14-Jan-18 | **Sunday** |
| 3 | 15-Jan-18 | Order of convergence of Regula – Falsi method |  |  |  |
| 16-Jan-18 | Examples based on Regula – Falsi method |  |  |  |
| 17-Jan-18 | Exercise questions based on Regula – Falsi method |  |  |  |
| 18-Jan-18 | Clarification of doubts |  |  |  |
| 19-Jan-18 | Operation on Power series, Shifting of summation index of power series |  |  |  |
| 20-Jan-18 | Analytic function |  |  |  |
| 21-Jan-18 | **Sunday** |
| 4 | 22-Jan-18 | [**Basant Panchami**](http://www.officeholidays.com/countries/india/vasant_panchami.php) /[**Sir Chhotu Ram Jayanti**](http://www.officeholidays.com/countries/india/haryana/2016.php) |
| 23-Jan-18 | Secant method |  |  |  |
| 24-Jan-18 | Examples based on Secant method |
| 25-Jan-18 | Exercise questions based on Secant method |  |  |  |
| 26-Jan-18 | [**Republic Day**](http://www.officeholidays.com/countries/india/india_republic_day.php) |
| 27-Jan-18 | Ordinary points of differential equations with numericals |  |  |  |
| 28-Jan-18 |  **Sunday** |
| 5 | 29-Jan-18 | Newton- Raphson method  |  |  |  |
| 30-Jan-18 | Order of convergence of Newton- Raphson method |  |  |  |
| 31-Jan-18 | **Guru Ravida’s Birthday** |  |  |  |

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|  | 1-Feb-18 | Examples based on Newton- Raphson method |  |  |  |
| 2-Feb-18 | Exercise questions based on Newton- Raphson method |  |  |  |
| 3-Feb-18 | Singular points of differential equations with numericals |  |  |  |
| 4-Feb-18 | **Sunday** |
| 6 | 5-Feb-18 | Comparison of iterative method |  |  |  |
| 6-Feb-18 | Newton- Raphson iterative formulae for finding the inverse, square roots, inverse square root of a number |  |  |  |
| 7-Feb-18 | Clarification of doubts |  |  |  |
| 8-Feb-18 | Gauss elimination method |  |  |  |
| 9-Feb-18 | Numericals based on power series solutions of differential equations |  |  |  |
| 10-Feb-18 | Numericals based on power series solutions of differential equations |
| 11-Feb-18 |  **Sunday** |
| 7 | 12-Feb-18 | Examples based on Gauss elimination method |  |  |  |
| 13-Feb-18 | Clarification of doubts |
| 14-Feb-18 | [**Maha Shivratri**](http://www.officeholidays.com/countries/india/maha_shivarati.php) |  |  |  |
| 15-Feb-18 | Black board presentation |  |  |  |
| 16-Feb-18 | Numericals based on Frobenius method in which roots are distinct and do not differ by an integer |  |  |  |
| 17-Feb-18 | Numericals based on Frobenius method in which roots are equal |  |  |  |
| 18-Feb-18 |  **Sunday** |
| 8 | 19-Feb-18 | Gauss Jordan method |  |  |  |
| 20-Feb-18 | Examples based on Gauss Jordan method |  |  |  |
| 21-Feb-18 | Exercise questions based on Gauss Jordan method |  |  |  |
| 22-Feb-18 | Clarification of doubts |  |  |  |
| 23-Feb-18 | Numericals based on Frobenius method in which roots are unequal and differ by an integer making coefficients of y infinite |  |  |  |
| 24-Feb-18 | Numericals based on Frobenius method in which roots are unequal and differ by an integer and making a coefficient indeterminate |  |  |  |
| 25-Feb-18 |  **Sunday** |
| 9 | 26-Feb-18 | Triangularization method |  |  |  |
| 27-Feb-18 | Assignment: Gauss elimination method , Gauss Jordan method |  |  |  |
| 28-Feb-18 |  **Holiday** |

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|  | 1-Mar-18 |  **Holiday** |
| 2-Mar-18 | [**Holi**](http://www.officeholidays.com/countries/india/holi.php) |
| 3-Mar-18 |  **Holiday** |
| 4-Mar-18 |  **Sunday** |
| 10 | 5-Mar-18 | Examples based on Triangularization method |  |  |  |
| 6-Mar-18 | Exercise questions based on Triangularization method |  |  |  |
| 7-Mar-18 | Crout’s method |  |  |  |
| 8-Mar-18 | Examples and exercise questions based on Crout’s method |  |  |  |
| 9-Mar-18 | Miscellaneous examples based on Frobenius Method |  |  |  |
| 10-Mar-18 | Results related to Beta and Gamma function |  |  |  |
| 11-Mar-18 |  **Sunday** |
| 11 | 12-Mar-18 | Test: Triangularization method |  |  |  |
| 13-Mar-18 | Cholesky method  |  |  |  |
| 14-Mar-18 | Examples based on Cholesky method |  |  |  |
| 15-Mar-18 | Execise questions based on Cholesky method |  |  |  |
| 16-Mar-18 | Bessel’s equation, solution of Bessel’s equation |  |  |  |
| 17-Mar-18 | Bessel’s function, Theorems based on Bessel’s function |  |  |  |
| 18-Mar-18 | **Sunday** |
| 12 | 19-Mar-18 | Clarification of doubts |  |  |  |
| 20-Mar-18 | Black board presentation |  |  |  |
| 21-Mar-18 | Jacobi’s method |  |  |  |
| 22-Mar-18 | Examples based on Jacobi’s method |  |  |  |
| 23-Mar-18 | [**Shaheedi Diwas of Bhagat Singh, Rajguru & Sukhdev**](http://www.officeholidays.com/countries/india/haryana/2016.php) |
| 24-Mar-18 | Mathematics Quiz |  |  |  |
| 25-Mar-18 |  **Sunday** |
| 13 | 26-Mar-18 | Exercise questions based on Jacobi’s method |  |  |  |
| 27-Mar-18 | Gauss- Seidel method  |  |  |  |
| 28-Mar-18 | Example and exercise questions based on Gauss- Seidel method |  |  |  |
| 29-Mar-18 | [**Mahavir Jayanti**](http://www.officeholidays.com/countries/india/mahavir_jayanti.php) |
| 30-Mar-18 | Recurrence relations for Bessel’s function |  |  |  |
| 31-Mar-18 | Numerical based on recurrence formulas |  |  |  |

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| 14 | 1-Apr-18 |  **Sunday** |
| 2-Apr-18 | Relaxation method  |  |  |  |
| 3-Apr-18 | Example based on Relaxation method |  |  |  |
| 4-Apr-18 | Exercise questions based on Relaxation method |  |  |  |
| 5-Apr-18 | Test: Cholesky method |  |  |  |
| 6-Apr-18 | Generating function for Jn(x) |  |  |  |
| 7-Apr-18 | Equations reducible to Bessel’s equation, Orthogonality relation of Bessel’s function |  |  |  |
| 8-Apr-18 |  **Sunday** |
| 15 | 9-Apr-18 | Clarification of doubts |  |  |  |
| 10-Apr-18 | Revision: Jacobi’s method |  |  |  |
| 11-Apr-18 | Test: Jacobi’s method |  |  |  |
| 12-Apr-18 | Revision: Gauss – Seidel method |  |  |  |
| 13-Apr-18 | Revision: Numericals based on power series solutions of differential equations |  |  |  |
| 14-Apr-18 | [**Dr Ambedkar Jayanti**](http://www.officeholidays.com/countries/india/ambedkar_jayanti.php) **/** [**Vaisakhi**](http://www.officeholidays.com/countries/india/haryana/2016.php) |
| 15-Apr-18 |  **Sunday** |
| 16 | 16-Apr-18 | Revision: Relaxation method |  |  |  |
| 17-Apr-18 | Test: Relaxation method |  |  |  |
| 18-Apr-18 |  **Lord** [**Parashurama Jayanti**](http://www.officeholidays.com/countries/india/2016.php) |
| 19-Apr-18 | Black board presentation |  |  |  |
| 20-Apr-18 | Revision: Numericals based on Frobenius method |  |  |  |
| 21-Apr-18 | Test: Theorems based on Bessel’s function |  |  |  |
| 22-Apr-18 |  **Sunday** |
| 17 | 23-Apr-18 | Revision: Equations reducible to Bessel’s equation |  |  |  |
| 24-Apr-18 | Revision: Orthogonality relation of Bessel’s function |  |  |  |
| 25-Apr-18 | Test: Recurrence relations for Bessel’s function |  |  |  |
| 26-Apr-18 | Test: Generating function for Jn(x) |  |  |  |
| 27-Apr-18 | Clarification of doubts |  |  |  |
| 28-Apr-18 | Test: All syllabus |  |  |  |