Saraswati Mahila Mahavidyalaya, Palwal

**Lesson Plan**

**Name of the Assistant/Associate Professor: Ms. Neha Singh**

**Class and Section: BSC C.S II Sem(I YR)**

**Name of subject: Number Theory & Trigonometry**

**Subject Lesson Plan : 18 weeks(from January 2018 to April 2018)**

**(Note: Prepare as per list of holidays declared by Haryana govt.)**

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| **WEEK 1** |
| **ASSIGNMENT:** |
| **WEEK 1,DAY1 ,DATE :01/01/2018(MONDAY)** |
| **Demoivre’s th n & its applications – Introduction**   * **Demoivre’s Theorem** |
| **WEEK 1 ,DAY 2 ,DATE :02/01/2018(TUESDAY)** |
| **Illustration of Demoivre’s Theorem** |
| **WEEK 1,DAY 3 ,DATE :03/01/2018(WEDNESDAY)** |
| **Doubt’s of Demoivre’s theorem** |
| **WEEK 1 ,DAY 4 ,DATE :04/01/2018(THURSDAY)** |
| **Root’s of complex number** |
| **WEEK 1,DAY 5 ,DATE :05/01/2018(FRIDAY)** |
| **Holiday on account of Guru Govind Singh’s Birthday** |
| **WEEK 1 ,DAY 6 ,DATE :06/01/2018(SATURDAY)** |
| **Illustration’s of Roots of a Complex Number** |
| **WEEK 2** |
| **ASSIGNMENT:** |
| **WEEK 2,DAY1 ,DATE :08/01/2018(MONDAY)** |
| **Solution or equations**  **Illustrations of solution of euqations** |
| **WEEK 2 ,DAY 2 ,DATE :09/01/2018(TUESDAY)** |
| **Expansion of Cos nx & Sin nx in terms of Cos x & Sin x**  **Expansion of tan nx** |
| **WEEK 2,DAY 3 ,DATE :10/01/2018(WEDNESDAY)** |
| **Problem discussion** |
| **WEEK 2 ,DAY 4 ,DATE :11/01/2018(THURSDAY)** |
| **Formation of equations & its illustrations** |
| **WEEK 2,DAY 5 ,DATE :12/01/2018(FRIDAY)** |
| **Cosnx & Sinnx in terms of x , expansion of nth of sin x in terms of cosines or multiples of x , problem discussion** |
| **WEEK 2 ,DAY 6 ,DATE :13/01/2018(SATURDAY)** |
| **Doubt’s of Demoivre’s theorem & its Applications** |
| **WEEK 3** |
| **ASSIGNMENT: Demoivre’s theorem, Root’s of a complex number** |
| **WEEK 3,DAY1 ,DATE :15/01/2018(MONDAY)** |
| **Introducation of circular function of complex variable** |
| **WEEK 3 ,DAY 2 ,DATE :16/01/2018(TUESDAY)** |
| **Circular function of complex variable, Euler’s theorem & illustrations** |
| **WEEK 3,DAY 3 ,DATE :17/01/2018(WEDNESDAY)** |
| **Problem discussion & checking of assignment** |
| **WEEK 3 ,DAY 4 ,DATE :18/01/2018(THURSDAY)** |
| **Introduction of hyperbolic function, formulae of hyperbolic function** |
| **WEEK 3,DAY 5 ,DATE :19/01/2018(FRIDAY)** |
| **Problem discussion** |
| **WEEK 3 ,DAY 6 ,DATE :20/01/2018(SATURDAY)**  **Board test o hyperbolic function** |
| **WEEK 4** |
| **ASSIGNMENT: circular function of complex variable** |
| **WEEK 3,DAY1 ,DATE :22/01/2018(MONDAY)** |
| **Holiday on account of Basant Panchmi.** |
| **WEEK 4 ,DAY 2 ,DATE :23/01/2018(TUESDAY)** |
| **Introduction of logarithm of complex quantity** |
| **WEEK 4,DAY 3 ,DATE :24/01/2018(WEDNESDAY)** |
| **Holiday on account of Sir Chotu Ram Jayanti.** |
| **WEEK 4 ,DAY 4 ,DATE :25/01/2018(THURSDAY)** |
| **General logarithm function** |
| **WEEK 4,DAY 5 ,DATE :26/01/2018(FRIDAY)** |
| **Holiday on account of Republic Day.** |
| **WEEK 4 ,DAY 6 ,DATE :27/01/2018(SATURDAY)** |
| **Illustrations of logarithm of complex quantity, discussion of assignment** |
| **WEEK 5** |
| **ASSIGNMENT: logarithm function** |
| **WEEK 5,DAY1 ,DATE :29/01/2018(MONDAY)** |
| **Introduction of inverse circular and inverser hyperbolic function** |
| **WEEK 5 ,DAY 2 ,DATE :30/01/2018(TUESDAY)** |
| **Relation between inverse function** |
| **WEEK 5,DAY 3 ,DATE :31/01/2018(WEDNESDAY)** |
| **Holiday on account of Guru Ravi Dass Jayanti** |
| **WEEK 5 ,DAY 4 ,DATE :01/02/2018(THURSDAY)** |
| **Illustrations of inverse circular function** |
| **WEEK 5,DAY 5 ,DATE :02/02/2018(FRIDAY)** |
| **Problem discussion** |
| **WEEK 5 ,DAY 6 ,DATE :03/02/2018(SATURDAY)**  **Inverse hyperbolic function, Gregory’s Series**  **Discussion of assignment** |
| **WEEK 6** |
| **ASSIGNMENT: Gregory’s Series** |
| **WEEK 6,DAY1 ,DATE :05/02/2018(MONDAY)** |
| **Summation of Series Introducion** |
| **WEEK 6 ,DAY 2 ,DATE :06/02/2018(TUESDAY)** |
| **Illustrations of Summation of Series and discussion of assignment** |
| **WEEK 6,DAY 3 ,DATE :07/02/2018(WEDNESDAY)** |
| **Method of differences & problem discussion** |
| **WEEK 6 ,DAY 4 ,DATE :08/02/2018(THURSDAY)** |
| **Series depending upon the G.P or the Binomial Series** |
| **WEEK 6,DAY 5 ,DATE :09/02/2018(FRIDAY)** |
| **Illustrations&Problem discussion** |
| **WEEK 6 ,DAY 6 ,DATE :10/02/2018(SATURDAY)** |
| **Holiday on account of Maharshi Dayanand Saraswati Jayanti.** |
| **WEEK 7** |
| **ASSIGNMENT:Summation series** |
| **WEEK 7,DAY1 ,DATE :12/02/2018(MONDAY)** |
| **Class test of Demoivre’s theorem and its application & hyperbolic functions** |
| **WEEK 7 ,DAY 2 ,DATE :13/02/2018(TUESDAY)** |
| **Holiday on account of Maha Shivaratri.** |
| **WEEK 7,DAY 3 ,DATE :14/02/2018(WEDNESDAY)** |
| **Introduction of Divisibility and assignment discussion** |
| **WEEK 7 ,DAY 4 ,DATE :15/02/2018(THURSDAY)** |
| **Theorem of Divisibility** |
| **WEEK 7,DAY 5 ,DATE :16/02/2018(FRIDAY)** |
| **Theorem of Divisibility & test discussion** |
| **WEEK 7 ,DAY 6 ,DATE :17/01/2018(SATURDAY)** |
| **Illustration of Divisibility** |
| **WEEK 8** |
| **ASSIGNMENT: Theorem of Divisibility** |
| **WEEK 8,DAY1 ,DATE :19/02/2018(MONDAY)** |
| **Problem discussion of divisibility** |
| **WEEK 8 ,DAY 2 ,DATE :20/02/2018(TUESDAY)** |
| **Division Algorithm & assignment discussion** |
| **WEEK 8,DAY 3 ,DATE :21/02/2018(WEDNESDAY)** |
| **GCD&LCM Theorem** |
| **WEEK 8 ,DAY 4 ,DATE :22/02/2018(THURSDAY)** |
| **Gauss theorem & its illustrations** |
| **WEEK 8,DAY 5 ,DATE :23/02/2018(FRIDAY)** |
| **Euclid test, Euclid IInd theorem & fundamental theorem of arithmetic** |
| **WEEK 8 ,DAY 6 ,DATE :24/02/2018(SATURDAY)** |
| **Canonical form & problem discussion** |
| **WEEK 9** |
| **ASSIGNMENT: Gauss theorem and Euclid lemma** |
| **WEEK 9,DAY1 ,DATE :26/02/2018(MONDAY)** |
| **Problem discussion** |
| **WEEK 9 ,DAY 2 ,DATE :27/02/2018(TUESDAY)** |
| **Class test of Divisibility** |
| **WEEK 9,DAY 3 ,DATE :28/02/2018(WEDNESDAY)** |
| **VACATION -II** |
| **WEEK 9 ,DAY 4 ,DATE :01/03/2018(THURSDAY)** |
| **VACATION -II** |
| **WEEK 9,DAY 5 ,DATE :02/03/2018(FRIDAY)** |
| **VACATION -II** |
| **WEEK 9 ,DAY 6 ,DATE :03/03/2018(SATURDAY)** |
| **VACATION -II** |
| **WEEK 10** |
| **ASSIGNMENT: Division Algorithm** |
| **WEEK 10,DAY1 ,DATE :05/03/2018(MONDAY)** |
| **Introduction of Congruences and its theorem**  **Test discussion** |
| **WEEK 10,DAY 2 ,DATE :06/03/2018(TUESDAY)** |
| **Illustrations** |
| **WEEK 10,DAY 3 ,DATE :07/03/2018(WEDNESDAY)** |
| **Linear congruences and its theorem , assignment discussion** |
| **WEEK 10,DAY 4 ,DATE :08/03/2018(THURSDAY)** |
| **illustration** |
| **WEEK 10,DAY 5 ,DATE :09/03/2018(FRIDAY)** |
| **Linear Diophantine equations and its theorem** |
| **WEEK 10 ,DAY 6 ,DATE :10/03/2018(SATURDAY)** |
| **illustrations** |
| **WEEK 11** |
| **ASSIGNMENT: linear Congruence theorem** |
| **WEEK 11,DAY1 ,DATE :12/03/2018(MONDAY)** |
| **Problem discussion** |
| **WEEK 11,DAY 2 ,DATE :13/03/2018(TUESDAY)** |
| **Problem discussion** |
| **WEEK 11,DAY 3 ,DATE :14/03/2018(WEDNESDAY)** |
| **Fernat’s theorem & its illustrations and assignment discussion** |
| **WEEK 11,DAY 4 ,DATE :15/03/2018(THURSDAY)** |
| **Illustration** |
| **WEEK 11,DAY 5 ,DATE :16/03/2018(FRIDAY)** |
| **Wilson’s theorem and its illustration** |
| **WEEK 11 ,DAY 6 ,DATE :17/03/2018(SATURDAY)** |
| **Problem discussion of Fermat theorem and Wilson theorem** |
| **WEEK 12** |
| **ASSIGNMENT: Fermat theorem and Wilson theorem** |
| **WEEK 12,DAY1 ,DATE :19/03/2018(MONDAY)** |
| **Chinese Remainder theorem and its illustration** |
| **WEEK 12,DAY 2 ,DATE :20/03/2018(TUESDAY)** |
| **illustration** |
| **WEEK 12,DAY 3 ,DATE :21/03/2018(WEDNESDAY)** |
| **Problem discussion** |
| **WEEK 12,DAY 4 ,DATE :22/03/2018(THURSDAY)** |
| **Problem discussion & assignment checking** |
| **WEEK 12,DAY 5 ,DATE :23/03/2018(FRIDAY)** |
| **Holiday on account of Shahidi diwas.** |
| **WEEK 12 ,DAY 6 ,DATE :24/03/2018(SATURDAY)** |
| **Board Test** |
| **WEEK 13** |
| **ASSIGNMENT: Chinese’s Remainder Theorem** |
| **WEEK 13,DAY1 ,DATE :26/03/2018(MONDAY)** |
| **Introduction of Euler’s function and its theorem** |
| **WEEK 13,DAY 2 ,DATE :27/03/2018(TUESDAY)** |
| **illustrations** |
| **WEEK 13,DAY 3 ,DATE :28/03/2018(WEDNESDAY)** |
| **Residue sustem, complete residue system, reduce residue system** |
| **WEEK 13,DAY 4 ,DATE :29/03/2018(THURSDAY)** |
| **Holiday on account of Mahavir jayanti.** |
| **WEEK 13,DAY 5 ,DATE :30/03/2018(FRIDAY)** |
| **Euler generalization of fermat theorem &its illustrations** |
| **WEEK 13 ,DAY 6 ,DATE :31/03/2018(SATURDAY)** |
| **Problem discussion** |
| **WEEK 14** |
| **ASSIGNMENT: theorem of Residue** |
| **WEEK 14,DAY1 ,DATE :02/04/2018(MONDAY)** |
| **Introduction of GIF and its illustration** |
| **WEEK 14,DAY 2 ,DATE :03/04/2018(TUESDAY)** |
| **Depolignac’s formula and its illustration** |
| **WEEK 14,DAY 3 ,DATE :04/04/2018(WEDNESDAY)** |
| **Theorem and assignment discussion** |
| **WEEK 14,DAY 4 ,DATE :05/04/2018(THURSDAY)** |
| **Introducation of Divisor function, sigma function and its illustration** |
| **WEEK 14,DAY 5 ,DATE :06/04/2018(FRIDAY)** |
| **Theorem based on Divisor function, sigma function and its illustration** |
| **WEEK 14 ,DAY 6 ,DATE :07/04/2018(SATURDAY)** |
| **Problem discussion of Divisor function, sigma function** |
| **WEEK 15** |
| **ASSIGNMENT: Sigma function and Divisor function theorem** |
| **WEEK 15,DAY1 ,DATE :09/04/2018(MONDAY)** |
| **Introduction of Mobius function, Mobius inversion formula and its converse** |
| **WEEK 15,DAY 2 ,DATE :10/04/2018(TUESDAY)** |
| **illustrations** |
| **WEEK 15,DAY 3 ,DATE :11/04/2018(WEDNESDAY)** |
| **Problem discussion** |
| **WEEK 15,DAY 4 ,DATE :12/04/2018(THURSDAY)** |
| **Problem discussion** |
| **WEEK 15,DAY 5 ,DATE :13/04/2018(FRIDAY)** |
| **Introducation of Quadratic congruence. & theorems based on Quadratic congruence** |
| **WEEK 15 ,DAY 6 ,DATE :14/04/2018(SATURDAY)** |
| **Holiday on account of Vaisakhi & Dr B.R. Ambedkar’s Jayanti.** |
| **WEEK 16** |
| **ASSIGNMENT: theorem based on Quadratic congruence** |
| **WEEK 16,DAY1 ,DATE :16/04/2018(MONDAY)** |
| **Quadratic Residue & its illustration** |
| **WEEK 16,DAY 2 ,DATE :17/04/2018(TUESDAY)** |
| **Introduction of Legendre’s Symbols and its properties** |
| **WEEK 16,DAY 3 ,DATE :18/04/2018(WEDNESDAY)** |
| **Holiday on account of Maharshi Pasuram Jayanti** |
| **WEEK 16,DAY 4 ,DATE :19/04/2018(THURSDAY)** |
| **Gauss lemma & its theorem** |
| **WEEK 16,DAY 5 ,DATE :20/04/2018(FRIDAY)** |
| **Gauss Reciprocity law and discussion of assignment** |
| **WEEK 16 ,DAY 6 ,DATE :21/04/2018(SATURDAY)** |
| **illustration** |
| **WEEK 17** |
| **ASSIGNMENT: Gauss Reciprocity Law and Gauss Lemma** |
| **WEEK 17,DAY1 ,DATE :23/04/2018(MONDAY)** |
| **Revision** |
| **WEEK 17,DAY 2 ,DATE :24/04/2018(TUESDAY)** |
| **Revision** |
| **WEEK 17,DAY 3 ,DATE :25/04/2018(WEDNESDAY)** |
| **Revision** |
| **WEEK 17,DAY 4 ,DATE :26/04/2018(THURSDAY)** |
| **Revision** |
| **WEEK 17,DAY 5 ,DATE :27/04/2018(FRIDAY)** |
| **Revision** |
| **WEEK 17 ,DAY 6 ,DATE :28/04/2018(SATURDAY)** |
| **Revision** |
| **WEEK 18** |
| **ASSIGNMENT:** |
| **WEEK 18,DAY1 ,DATE :30/04/2018(MONDAY)** |
| **Revision** |