Saraswati Mahila Mahavidyalaya, Palwal

**Lesson Plan**

**Name of the Assistant/Associate Professor: Ms. Karuna Garg**

**Class and Section: B.sc c.s 3rd yr(6th sem)**

**Name of subject: Real and Complex Analysis**

**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)** |
| **Revision of rules & formulae of partial differentiation** |
| **WEEK 1 ,DAY 2 ,DATE :02/01/2018(TUESDAY)** |
| **Introduction to jacobians and questions based on it** |
| **WEEK 1,DAY 3 ,DATE :03/01/2018(WEDNESDAY)** |
| **Some theorems on jacobians** |
| **WEEK 1 ,DAY 4 ,DATE :04/01/2018(THURSDAY)** |
| **Functionally independence & dependence of functions & examples** |
| **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)** |
| **On board discussion of question** |
| **WEEK 2** |
| **ASSIGNMENT: Problems on jacobians** |
| **WEEK 2,DAY1 ,DATE :08/01/2018(MONDAY)** |
| **Introduction to beta & gamma functions** |
| **WEEK 2 ,DAY 2 ,DATE :09/01/2018(TUESDAY)** |
| **Properties of beta functions** |
| **WEEK 2,DAY 3 ,DATE :10/01/2018(WEDNESDAY)** |
| **Problems based on beta functions** |
| **WEEK 2 ,DAY 4 ,DATE :11/01/2018(THURSDAY)** |
| **Examples of beta function** |
| **WEEK 2,DAY 5 ,DATE :12/01/2018(FRIDAY)** |
| **Properties of Gamma function** |
| **WEEK 2 ,DAY 6 ,DATE :13/01/2018(SATURDAY)** |
| **Question on Gamma function** |
| **WEEK 3** |
| **ASSIGNMENT: Properties of Beta & Gamma function** |
| **WEEK 3,DAY1 ,DATE :15/01/2018(MONDAY)** |
| **Duplication formula & other theoram** |
| **WEEK 3 ,DAY 2 ,DATE :16/01/2018(TUESDAY)** |
| **Examples of Beta & Gamma function** |
| **WEEK 3,DAY 3 ,DATE :17/01/2018(WEDNESDAY)** |
| **Evaluation of Double Integral** |
| **WEEK 3 ,DAY 4 ,DATE :18/01/2018(THURSDAY)** |
| **Substitution method of Double Integral** |
| **WEEK 3,DAY 5 ,DATE :19/01/2018(FRIDAY)** |
| **Examples of Double Integral** |
| **WEEK 3 ,DAY 6 ,DATE :20/01/2018(SATURDAY)**  **Evaluation of Triple Integral** |
| **WEEK 4** |
| **ASSIGNMENT: Test is declared for Beta Gamma Function** |
| **WEEK 3,DAY1 ,DATE :22/01/2018(MONDAY)** |
| **Holiday on account of Basant Panchmi.** |
| **WEEK 4 ,DAY 2 ,DATE :23/01/2018(TUESDAY)** |
| **Substitution method for Triple Integral** |
| **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)** |
| **Question discussion on Beta & Gamma 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)** |
| **Application of Double & Triple & Integral** |
| **WEEK 5** |
| **ASSIGNMENT: Question from exercise of Beta & Gamma function** |
| **WEEK 5,DAY1 ,DATE :29/01/2018(MONDAY)** |
| **Drichlet's Integral** |
| **WEEK 5 ,DAY 2 ,DATE :30/01/2018(TUESDAY)** |
| **Problems based on Double & Triple Integral** |
| **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)** |
| **Properties based on Double & Triple Integral** |
| **WEEK 5,DAY 5 ,DATE :02/02/2018(FRIDAY)** |
| **Black board revision of Beta & Gamma Functions** |
| **WEEK 5 ,DAY 6 ,DATE :03/02/2018(SATURDAY)**  **Class test on Beta & Gamma functions** |
| **WEEK 6** |
| **ASSIGNMENT: Double & Triple Integral question** |
| **WEEK 6,DAY1 ,DATE :05/02/2018(MONDAY)** |
| **Discussion of Assignment problems** |
| **WEEK 6 ,DAY 2 ,DATE :06/02/2018(TUESDAY)** |
| **Problems from all previous chapter** |
| **WEEK 6,DAY 3 ,DATE :07/02/2018(WEDNESDAY)** |
| **Distribution & discussion of test papers & assignment** |
| **WEEK 6 ,DAY 4 ,DATE :08/02/2018(THURSDAY)** |
| **Discussion of question from simple papers related to chapters done** |
| **WEEK 6,DAY 5 ,DATE :09/02/2018(FRIDAY)** |
| **Change of order of Integration** |
| **WEEK 6 ,DAY 6 ,DATE :10/02/2018(SATURDAY)** |
| **Holiday on account of Maharshi Dayanand Saraswati Jayanti.** |
| **WEEK 7** |
| **ASSIGNMENT: Question on change of order of Integration** |
| **WEEK 7,DAY1 ,DATE :12/02/2018(MONDAY)** |
| **Problems on the above type** |
| **WEEK 7 ,DAY 2 ,DATE :13/02/2018(TUESDAY)** |
| **Holiday on account of Maha Shivaratri.** |
| **WEEK 7,DAY 3 ,DATE :14/02/2018(WEDNESDAY)** |
| **Doubts of Students** |
| **WEEK 7 ,DAY 4 ,DATE :15/02/2018(THURSDAY)** |
| **Introduction to Fourier series**  **&**  **Some important results** |
| **WEEK 7,DAY 5 ,DATE :16/02/2018(FRIDAY)** |
| **Determination of Fourier coefficient**  **&**  **Fourier series for even & odd function** |
| **WEEK 7 ,DAY 6 ,DATE :17/01/2018(SATURDAY)** |
| **Dirichlet's condition & some other theorems** |
| **WEEK 8** |
| **ASSIGNMENT:** |
| **WEEK 8,DAY1 ,DATE :19/02/2018(MONDAY)** |
| **Examples of Fourier expansion of piecewise monotonic continuous function** |
| **WEEK 8 ,DAY 2 ,DATE :20/02/2018(TUESDAY)** |
| **Fourier expansion of fourier having point of discontinuty** |
| **WEEK 8,DAY 3 ,DATE :21/02/2018(WEDNESDAY)** |
| **Fourier expansion with change of interval** |
| **WEEK 8 ,DAY 4 ,DATE :22/02/2018(THURSDAY)** |
| **Half range series** |
| **WEEK 8,DAY 5 ,DATE :23/02/2018(FRIDAY)** |
| **Examples on half range series** |
| **WEEK 8 ,DAY 6 ,DATE :24/02/2018(SATURDAY)** |
| **More examples on fourier series** |
| **WEEK 9** |
| **ASSIGNMENT: On fourier series** |
| **WEEK 9,DAY1 ,DATE :26/02/2018(MONDAY)** |
| **Parseval's identity & examples** |
| **WEEK 9 ,DAY 2 ,DATE :27/02/2018(TUESDAY)** |
| **Doubtsof students. Test announced.** |
| **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:** |
| **WEEK 10,DAY1 ,DATE :05/03/2018(MONDAY)** |
| **Class test** |
| **WEEK 10,DAY 2 ,DATE :06/03/2018(TUESDAY)** |
| **Introduction to complex function**  **Stereographic projection** |
| **WEEK 10,DAY 3 ,DATE :07/03/2018(WEDNESDAY)** |
| **Questions on stereographic projection** |
| **WEEK 10,DAY 4 ,DATE :08/03/2018(THURSDAY)** |
| **Limit,continuity & differentiability of complex function** |
| **WEEK 10,DAY 5 ,DATE :09/03/2018(FRIDAY)** |
| **Examples** |
| **WEEK 10 ,DAY 6 ,DATE :10/03/2018(SATURDAY)** |
| **Analytic function & C.R equation** |
| **WEEK 11** |
| **ASSIGNMENT: Question on sample paper** |
| **WEEK 11,DAY1 ,DATE :12/03/2018(MONDAY)** |
| **Examples on analytic function** |
| **WEEK 11,DAY 2 ,DATE :13/03/2018(TUESDAY)** |
| **Sufficient condition of analytic fns** |
| **WEEK 11,DAY 3 ,DATE :14/03/2018(WEDNESDAY)** |
| **C.R equation in polar form & other theorems** |
| **WEEK 11,DAY 4 ,DATE :15/03/2018(THURSDAY)** |
| **Discussion of question** |
| **WEEK 11,DAY 5 ,DATE :16/03/2018(FRIDAY)** |
| **Construction of analytic function**  **Milne's Thompson's method** |
| **WEEK 11 ,DAY 6 ,DATE :17/03/2018(SATURDAY)** |
| **Exact differential method & examples** |
| **WEEK 12** |
| **ASSIGNMENT: Question on analytic function** |
| **WEEK 12,DAY1 ,DATE :19/03/2018(MONDAY)** |
| **Application of analytic function**  **&**  **Problem solving** |
| **WEEK 12,DAY 2 ,DATE :20/03/2018(TUESDAY)** |
| **Revision of complex function by giving black board test** |
| **WEEK 12,DAY 3 ,DATE :21/03/2018(WEDNESDAY)** |
| **Introduction to elementary function & mapping such as translation,rotation,magnification etc** |
| **WEEK 12,DAY 4 ,DATE :22/03/2018(THURSDAY)** |
| **Inverse mapping & its theorem** |
| **WEEK 12,DAY 5 ,DATE :23/03/2018(FRIDAY)** |
| **Holiday on account of Shahidi diwas.** |
| **WEEK 12 ,DAY 6 ,DATE :24/03/2018(SATURDAY)** |
| **Conformal mapping & its theorem** |
| **WEEK 13** |
| **ASSIGNMENT: Elementary function** |
| **WEEK 13,DAY1 ,DATE :26/03/2018(MONDAY)** |
| **Theorem on conformal mapping**  **&**  **examples** |
| **WEEK 13,DAY 2 ,DATE :27/03/2018(TUESDAY)** |
| **Mobius transformation, fixed points & theorem, nature of mobius transformation** |
| **WEEK 13,DAY 3 ,DATE :28/03/2018(WEDNESDAY)** |
| **Question based on mobius transformation** |
| **WEEK 13,DAY 4 ,DATE :29/03/2018(THURSDAY)** |
| **Holiday on account of Mahavir jayanti.** |
| **WEEK 13,DAY 5 ,DATE :30/03/2018(FRIDAY)** |
| **Critical mapping** |
| **WEEK 13 ,DAY 6 ,DATE :31/03/2018(SATURDAY)** |
| **Critical mapping & examples** |
| **WEEK 14** |
| **ASSIGNMENT: Mobius transformation question** |
| **WEEK 14,DAY1 ,DATE :02/04/2018(MONDAY)** |
| **Examples of critical mapping** |
| **WEEK 14,DAY 2 ,DATE :03/04/2018(TUESDAY)** |
| **Doubts of students from assignment** |
| **WEEK 14,DAY 3 ,DATE :04/04/2018(WEDNESDAY)** |
| **Discussion of question from exercise** |
| **WEEK 14,DAY 4 ,DATE :05/04/2018(THURSDAY)** |
| **Black board test for revision of elementary fns a**  **& mobius transformation** |
| **WEEK 14,DAY 5 ,DATE :06/04/2018(FRIDAY)** |
| **Doubts of students** |
| **WEEK 14 ,DAY 6 ,DATE :07/04/2018(SATURDAY)** |
| **Group discussion** |
| **WEEK 15** |
| **ASSIGNMENT: Critical mapping question** |
| **WEEK 15,DAY1 ,DATE :09/04/2018(MONDAY)** |
| **Discussion of sample paper question** |
| **WEEK 15,DAY 2 ,DATE :10/04/2018(TUESDAY)** |
| **Assignment discussion** |
| **WEEK 15,DAY 3 ,DATE :11/04/2018(WEDNESDAY)** |
| **Doubts of students from critical mappings** |
| **WEEK 15,DAY 4 ,DATE :12/04/2018(THURSDAY)** |
| **Discussion of doubts from mobius transformation & critical mapping. Jacobian revision to be done** |
| **WEEK 15,DAY 5 ,DATE :13/04/2018(FRIDAY)** |
| **More examples from exercise** |
| **WEEK 15 ,DAY 6 ,DATE :14/04/2018(SATURDAY)** |
| **Holiday on account of Vaisakhi & Dr B.R. Ambedkar’s Jayanti.** |
| **WEEK 16** |
| **ASSIGNMENT: Revision of beta 7 gamma function** |
| **WEEK 16,DAY1 ,DATE :16/04/2018(MONDAY)** |
| **Doubts of jacobians** |
| **WEEK 16,DAY 2 ,DATE :17/04/2018(TUESDAY)** |
| **Beta function revision** |
| **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)** |
| **Gamma function revision & poblem discussion** |
| **WEEK 16,DAY 5 ,DATE :20/04/2018(FRIDAY)** |
| **Revision of fourier series** |
| **WEEK 16 ,DAY 6 ,DATE :21/04/2018(SATURDAY)** |
| **Revision of fourier series & class test announcement** |
| **WEEK 17** |
| **ASSIGNMENT: Complex function question & C.R equation** |
| **WEEK 17,DAY1 ,DATE :23/04/2018(MONDAY)** |
| **Revision on board of C.R equation, analytic function** |
| **WEEK 17,DAY 2 ,DATE :24/04/2018(TUESDAY)** |
| **Class test** |
| **WEEK 17,DAY 3 ,DATE :25/04/2018(WEDNESDAY)** |
| **Revision of mobius transformation** |
| **WEEK 17,DAY 4 ,DATE :26/04/2018(THURSDAY)** |
| **Doubts of students** |
| **WEEK 17,DAY 5 ,DATE :27/04/2018(FRIDAY)** |
| **Test distribution & discussion** |
| **WEEK 17 ,DAY 6 ,DATE :28/04/2018(SATURDAY)** |
| **Revision** |
| **WEEK 18** |
| **ASSIGNMENT:** |
| **WEEK 18,DAY1 ,DATE :30/04/2018(MONDAY)** |
| **Revision** |