Five years Integrated M.Sc. Mathematics (Semester - 6)
Assessment Policy
060090601: CC13 Partial Differential Equation (Theory - 4 Credits)

| Assessment Code | Assessment Type | Duration of each | Occurrence | Each of marks | Weightage in CIE of 40 marks | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A1 | Unit Test | 90 minutes | 2 | 30 | $7 \times 2=14$ | Unit Test - 1: After completion of Unit-1 and Unit- 2 <br> Unit Test - 2: After completion of Unit- 3 and Unit - 4 |
| A2 | Internal Examination | 180 minutes | 1 | 60 | $14 \times 1=14$ | All units. |
| A3 | Assignment | 10 days | 4 | 10 | $1.75 \times 4=7$ | Assignment -1 : After completion of Unit-1 <br> Assignment - 2 : After completion of Unit-2 <br> Assignment -3 : After completion of Unit-3 <br> Assignment -4 : After completion of Unit-4 |
| A4 | Viva/Presentation | 15 minutes | 1 | 10 | $5 \times 1=5$ | Based on the partial differential equation |

## Assessment Type Classification:

| Assessment Code: | A1 | Coverage of Content: | Unit Test - 1: Covers Unit-1 and Unit- 2. |
| :--- | :--- | :--- | :--- |
| Assessment Type: | Unit Test-1 | Tentative Date : | Unit Test - 1:21/01/2019 |
| Kind of Question <br> Format: | Que. 1) a) Answer the following Question. (Any one out of two, each of 2 marks) <br> b) Answer the following Question. (Any one out of two, each of 3 marks) <br> c) Answer the following Question. (Any two out of three, each of 5 marks) <br> Que. 2) a) Answer the following Question. (Any one out of two, each of 2 marks) <br> b) Answer the following Question. (Any one out of two, each of 3 marks) <br> c) Answer the following Question. (Any two out of three, each of 5 marks) |  |  |
| Assessment: | Formative |  |  |


| Assessment Code: | A1 | Coverage of Content : | Unit Test - 2: Covers Unit-3 and Unit- 4. |
| :---: | :---: | :---: | :---: |
| Assessment Type : | Unit Test-2 | Tentative Date: | Unit Test - 2: 05/03/2019 |
| Kind of Question Format: | Que. 1) Answer the following Question. (Any three out of four, each of 5 marks) Que. 2) a) Answer the following Question. (each of 8 marks) <br> Or <br> a) Answer the following Question. (each of 8 marks) <br> b) Answer the following Question. (each of 7 marks) <br> Or <br> b) Answer the following Question. (each of 7 marks) |  |  |
| Assessment: | Formative |  |  |


| Assessment Code: | A2 | Coverage of Content: | All Units |
| :---: | :---: | :---: | :---: |
| Assessment Type: | Internal Examination | Tentative Date: | 01/04/2019 |
| Kind of Question Format: | Que. 1) a) Answer the following Question. (Any one out of two, each of 2 marks) <br> b) Answer the following Question. (Any one out of two, each of 3 marks) <br> c) Answer the following Question. (Any two out of three, each of 5 marks) <br> Que. 2) a) Answer the following Question. (Any one out of two, each of 2 marks) <br> b) Answer the following Question. (Any one out of two, each of 3 marks) <br> c) Answer the following Question. (Any two out of three, each of 5 marks) <br> Que. 3) Answer the following Question. (Any three out of four, each of 5 marks) <br> Que. 4) a) Answer the following Question. (each of 8 marks) <br> Or <br> a) Answer the following Question. (each of 8 marks) <br> b) Answer the following Question. (each of 7 marks) <br> Or <br> b) Answer the following Question. (each of 7 marks) |  |  |
| Assessment: | Formative |  |  |


| Assessment Code: | A3 | Coverage of Content : | Assignment - 1 : After completion of Unit-1 <br> Assignment - 2 : After completion of Unit-2 <br> Assignment - 3 : After completion of Unit-3 <br> Assignment - 4 : After completion of Unit-4 |
| :---: | :---: | :---: | :---: |
| Assessment Type : | Assignment | Tentative Date : | Assignment - 1 : 14/12/2019 <br> Assignment - 2 : 19/01/2019 <br> Assignment - 3 : 28/02/2019 <br> Assignment - 4 : 25/03/2019 |
| Kind of Question Format: | 1. 10 questions (short questions and long questions) from all units will be given as assignment. <br> 2. Questions will be given in the very next lecture once the unit gets over. <br> 3. Assignment has to be submitted after two days of completion of whole unit. <br> 4. Zero mark will be given for submission after given deadline. |  |  |
| Assessment: | Formative |  |  |
| Assessment Code: | A4 | Coverage of Content : | All Units |
| Assessment Type: | Viva | Tentative Date : | 01/04/2019 |
| Kind of Question Format: | 1. Topic should be given from the syllabus before 20 days of the presentation. <br> 2. 15 minutes should be given for presentation <br> 3. Viva should be taken after completion of presentation <br> 4. Zero marks will be given, if students remain absent on the day of presentation without taking prior permission of leave or students not give the presentation of given topic |  |  |
| Assessment: | Formative |  |  |

Five years Integrated M.Sc. Mathematics (Semester - 6)
Assessment Policy
060090601: CC13 Partial Differential Equation (Practical-2 Credits)

| Assessment Code | Assessment Type | Duration of each | Occurrence | Each of marks | Weightage in CIE of <br> 40 marks | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| P1 | Practical <br> Examination | 90 minutes | 2 | 30 | Practical $-1:$ After completion of Unit-2 <br> Practical $-2:$ After completion of Unit-3 |  |
| P2 | Practical <br> Examination | 90 minutes | 1 | 40 | $20 \times 1=20$ | Practical - $3:$ After completion of Unit-4 |


| Assessment Code : | A5 | Coverage of Content : | Practical - 1: After completion of Unit-1 and Unit-2 <br> Practical - 2: After completion of Unit-3 <br> Practical - 3: After completion of Unit-4 |
| :--- | :--- | :--- | :--- |
| Assessment Type : | Practical Examination | Practical - 1: 24/01/2019 <br> Practical - 2: 11/03/2019 |  |
| Kind of Question <br> Format: | 1. Practical Programme (2 out of 3, each of 10 Marks) <br> 2. Journal Submission (5 Marks) <br> 3. Viva Voce (5 Marks) |  |  |
| Assessment: | Formative |  |  |

## Assessment Type Mapping with Course Outcomes and Program Outcomes:

## Course outcomes:

Upon completion of the course, students shall be able to
CO1: identify partial differential equation and its order and degree.
CO2: Classify partial differential equations into linear and nonlinear equations and formulate partial differential equation form general solution.
CO3: identify appropriate solution procedures for a given partial differential equation.
CO4: find the general solution of second order linear homogeneous equations with constant coefficients.

C05: use the method of variation of parameters to find particular solutions of second order, linear homogeneous equations
CO6: apply a selection of standard solution techniques such as separation of variables and integral transform methods to the solution of partial differential equations.

## Programme Outcomes (PO)

## P0 1:Knowledge

Provides knowledge about the fundamentals of pure, applied and computing mathematics and its applications to students that creates the opportunities in industries and research centers.

## PO 2: Core Competence

Creates competency in science and mathematics to formulate, analyses and solve problem and/or also to pursue advanced study or research.

## PO 3:Breadth

Trains students having good knowledge in unearth core of academia and industry by the roots of mathematics.

## PO 4: Evaluation

Imparts in students to raise trial and error based curiosity and problem solving functionality with research based advanced tutorial for higher level decision makings tools.

| Assessment <br> Code | Course Outcomes |  |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | C01 | C02 | C03 | C04 | C05 | C06 | P01 | P02 | P03 | P04 |
| A1 | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |  | $\checkmark$ |
| A2 | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |  |
| A3 | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |  | $\checkmark$ |  | $\checkmark$ |
| A4 | $\checkmark$ |  | $\checkmark$ |  | $\checkmark$ | $\checkmark$ | $\checkmark$ |  | $\checkmark$ | $\checkmark$ |
| A5 | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |

