



Five years Integrated M.Sc. Mathematics (Semester - 2)  
Assessment Policy  
(060090205) CC3 Advanced Calculus (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 Sub Units 2.1, 2.2, 2.3 and 2.4<br>Unit Test – 2: After completion of Sub Units 2.5, 2.6, 2.7, 2.8, 2.9 and Unit – 3.   |
| A2              | Internal Examination | 180 minutes      | 1          | 60            | $14 \times 1 = 14$           | After completion of Unit-4, which covers all units.   |
| A3              | Assignment           | 10 days          | 5          | 10            | $1 \times 5 = 5$             | 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<br>Assignment - 5 : over all |
| A4              | Viva                 | 1 hour           | 1          | 40            | $7 \times 1 = 7$             | Based on the application of Numerical Analysis  |

### Assessment Type Classification:

|                          |  |                       |   |
|--------------------------|--|-----------------------|---|
| Assessment Code :        | A1   | Coverage of Content : | Unit Test – 1: Covers Unit-1 and Sub Units 2.1, 2.2,<br>Unit Test – 2: Covers Sub Units 2.3, 2.4, |
| Assessment Type :        | Unit Test-1 and Unit Test -2   | Tentative Date :      |   |
| Kind of Question Format: | Que. 1) Long Questions ( Any three out of four, each of 5 marks)<br>Que. 2) Long Questions ( Any three out of four, each of 5 marks) |                       |   |
| Assessment :             | Formative  |                       |   |



|                                 |  |                              |           |
|---------------------------------|--|------------------------------|-----------|
| <b>Assessment Code :</b>        | A2   | <b>Coverage of Content :</b> | All Units |
| <b>Assessment Type :</b>        | Internal Examination   | <b>Tentative Date :</b>      |           |
| <b>Kind of Question Format:</b> | Que. 1) Long Questions ( Any three out of four, each of 5 marks)<br>Que. 2) Long Questions ( Any three out of four, each of 5 marks)<br>Que. 3) Long Questions ( Any three out of four, each of 5 marks)<br>Que. 4) Long Questions ( Any three out of four, , each of 5 marks) |                              |           |
| <b>Assessment :</b>             | Summative  |                              |           |

|                                 |  |                              |  |
|---------------------------------|--|------------------------------|--|
| <b>Assessment Code :</b>        | A3   | <b>Coverage of Content :</b> | 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 |
| <b>Assessment Type :</b>        | Assignment   | <b>Tentative Date :</b>      | Assignment - 1 :<br>Assignment - 2 :<br>Assignment - 3 :<br>Assignment - 4 :   |
| <b>Kind of Question Format:</b> | 1. Per method two examples have to solve.<br>2. Questions will be given on regular bases of completion of particular method.<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. |                              |  |
| <b>Assessment :</b>             | Formative  |                              |  |

|                                 |  |                              |           |
|---------------------------------|--|------------------------------|-----------|
| <b>Assessment Code :</b>        | A4   | <b>Coverage of Content :</b> | All Units |
| <b>Assessment Type :</b>        | Viva   | <b>Tentative Date :</b>      |           |
| <b>Kind of Question Format:</b> | 1. 10-12 basic and short type of question asked to each student from any unit with equal weightage.<br>2. Marks will be given on the basis of knowledge share. |                              |           |
| <b>Assessment :</b>             | Summative  |                              |           |



Five years Integrated M.Sc. Mathematics (Semester - 7)  
Assessment Policy  
(060090205) CC3 Advanced Calculus (Practical – 2 Credits)

| Assessment Code | Assessment Type       | Duration of each | Occurrence | Each of marks | Weightage in CIE of 40 marks | Remarks  |
|-----------------|-----------------------|------------------|------------|---------------|------------------------------|--|
| A5              | Practical Examination | 120 minutes      | 2          | 20            | $10 \times 2 = 20$           | Practical – 1: After completion of Unit-1 and Unit-2<br>Practical – 2: After completion of Unit-3 and Unit-4 |

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

**Course outcomes: Upon completion of the course, students shall be able to**

**C01:** familiar with the ideas of the limit, Analyze continuity and discontinuity of functions of several variables.

**C02:** obtain the expansion of the function of two variables by, Taylor's and Maclaurins series for two variables.

**C03:** define Error and Approximation, Jacobians, Extreme values of function of two variables and Lagrange's methods of undetermined multipliers.

**C04:** interpret the vector quantity and its properties like gradient, divergence, curl and different operation of vector function.

**C05:** compute the Line Integrals, Surface Integral, Volume integral of vector function.

**C06:** understand the Green's, Gauss and Stoke's theorem & application of these theorem in finding the integration values.

**Programme Outcomes (PO)**

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## PO1: 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.

## PO2: Core Competence

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

## PO3: Breadth

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

## PO4: 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.

### Programme Outcomes and Course Outcomes mapping:

| Programme Outcomes | Course outcomes |     |     |     |     |     |
|--------------------|-----------------|-----|-----|-----|-----|-----|
|                    | C01             | C02 | C03 | C04 | C05 | C06 |
| PO1                | ✓               | ✓   |     |     |     |     |
| PO2                |                 | ✓   |     |     | ✓   |     |
| PO3                | ✓               |     | ✓   |     |     |     |
| PO4                |                 |     |     | ✓   | ✓   | ✓   |