Five years Integrated M.Sc. Mathematics (Semester - 6)
Assessment Policy
060090602: CC14 Mathematical Modelling (Theory – 6 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 x 2 = 14	Unit Test – 1: After completion of Unit-1 and Sub Units 2.1, 2.2 and 2.3 Unit Test – 2: After completion of Sub Units 2.4, 2.5, 2.6 and Unit – 3.
A2	Internal Examination	180 minutes	1	60	14 x 1 = 14	After completion of Unit-4, which covers all units.
A3	Assignment	10 days	4	10	1 x 4 = 4	Assignment - 1 : After completion of Unit-1 Assignment - 2 : After completion of Unit-2 Assignment - 3 : After completion of Unit-3 Assignment - 4 : After completion of Unit-4
A4	Presentation	1 hour	1	40	8 x 1 = 8	Based on the mathematical modelling and its implementation

Assessment Type Classification:

Assessment Code :	A1	Coverage of Content :	Unit Test – 1: Covers Unit-1 and Sub Units 2.1, 2.2 and 2.3 Unit Test – 2: Covers Sub Units 2.4, 2.5, 2.6 and Unit – 3.
Assessment Type :	Unit Test-1 and Unit Test -2	Tentative Date :	Unit Test – 1: 23/01/2019 Unit Test – 2: 08/03/2019
Kind of Question Format:	Que. 1 a) Very Short Questions (Any one of two, each of 2 marks) Que. 1 b) Short Questions (Any one of two, each of 3 marks) Que. 1 c) Long Questions (Any two of three, each of 5 marks) Que. 2 a) Very Short Questions (Any one of two, each of 2 marks) Que. 2 b) Short Questions (Any one of two, each of 3 marks) Que. 2 c) Long Questions (Any two of three, each of 5 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) Very Short Questions (Any one of two, each of 2 marks) Que. 1 b) Short Questions (Any one of two, each of 3 marks) Que. 1 c) Long Questions (Any two of three, each of 5 marks) Que. 2 a) Very Short Questions (Any one of two, each of 2 marks) Que. 2 b) Short Questions (Any one of two, each of 3 marks) Que. 2 c) Long Questions (Any two of three, each of 5 marks) Que. 3 a) Very Short Questions (Any one of two, each of 2 marks) Que. 3 b) Short Questions (Any one of two, each of 3 marks) Que. 3 c) Long Questions (Any two of three, each of 5 marks) Que. 4) Long Questions (Any three out of four, each of 5 marks)		
Assessment :	Formative		

Assessment Code :	A3	Coverage of Content :	Assignment - 1 : After completion of Unit-1 Assignment - 2 : After completion of Unit-2 Assignment - 3 : After completion of Unit-3 Assignment - 4 : After completion of Unit-4
Assessment Type :	Assignment	Tentative Date :	Assignment - 1 : 01/01/2019 Assignment - 2 : 01/02/2019 Assignment - 3 : 01/03/2019 Assignment - 4 : 25/03/2019
Kind of Question Format:	1. Per method two examples have to solve. 2. Questions will be given on regular bases of completion of particular method. 3. Assignment has to be submitted after two days of completion of whole unit. 4. Zero mark will be given for submission after given deadline.		
Assessment :	Formative		

Assessment Code :	A4	Coverage of Content :	All Units
Assessment Type :	Presentation	Tentative Date :	During Semester
Kind of Question Format:	1. Student has to select any one of the mathematical model from any of the units and has to present its application in real world situation. 2. The presentation will be evaluated on the basis of four parameters viz. (i) Clarity (ii) Teaching Methodology (iii) Expression (iv) Overall Impact of presentation. 3. Each parameter has weighted of 10 marks.		
Assessment :	Summative		

Assessment Type Mapping with Course Outcomes and Program Outcomes:

Course outcomes:
Upon completion of the course, students shall be able to
CO1: know the role and formation of mathematical model.
CO2: understand the characteristics and applicability mathematical model in various field.
CO3: design first order ordinary differential equation based mathematical model and resolve the problem of field like, growth and decay, compartment type situations and Dynamics etc.
CO4: apply the system of first order ordinary differential equation based mathematical model to resolve the problems related to Epidemic model, compartment model, Economical model, Arm race battles and dynamics models.
CO5: construct the mathematical model of second order ordinary differential equation to resolve various problems of astronomy.
CO6: establish the connection of applicability of mathematical models to resolve the real problems arise in the field of science and engineering.

Programme Outcomes (PO)

PO 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 Code	Course Outcomes						Programme Outcomes			
	CO1	CO2	CO3	CO4	CO5	CO6	PO1	PO2	PO3	PO4
A1	✓	✓	✓				✓	✓		
A2		✓	✓	✓	✓	✓		✓		✓
A3		✓	✓	✓	✓	✓		✓		✓
A4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓