Five years Integrated M.Sc. Mathematics (Semester - 8)
Assessment Policy
060090802: Advanced Functional Analysis

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 the completion of whole unit 1 and Unit 2 (i.e. 2.1, 2.2, 2.3) **Unit Test 2: -** After the completion of Unit 2 (2.4, 2.5) and whole Unit 3
A2	Internal Exam	3 hours	1	60	14 X 1 = 14	Cover Unit: - All Units
A3	Assignment	15 Days	4	10	1.75 X 4 = 7	Cover Unit: - All Units
A4	Presentation/Viva	20 Minutes	1	5	1 X 5 = 5	Cover Unit: - All Units

Assessment Type Classification:

Assessment Code :	A1	**Coverage of Content :**	From whole unit 1 and unit 2 (i.e. 2.1, 2.2, 2.3)
Assessment Type :	Unit Test 1	**Tentative Date :**	21/02/2019
Kind of Question Format:	Q1(A) Answer the following Q1(B) Answer the following. (Any 1) Q1(C) Answer the following. (Any 2) Q2(A) Answer the following Q2(B) Answer the following. (Any 1) Q2(C) Answer the following. (Any 2)		[1 X 2 = 2] [1 X 3 = 3] [2 X 5 = 10] [1 X 2 = 2] [1 X 3 = 3] [2 X 5 = 10]
Assessment :	Formative		

Assessment Code :	A1	**Coverage of Content :**	From Unit 2 (2.5, 2.6, 2.7, 2,8) and whole Unit 3
Assessment Type :	Unit Test 2	**Tentative Date :**	28/03/2019

Kind of Question Format:	Q1(A) Answer the following Q1(B) Answer the following. (Any 1) Q1(C) Answer the following. (Any 2) Q2(A) Answer the following Q2(B) Answer the following. (Any 1) Q2(C) Answer the following. (Any 2)	[1 X 2 = 2] [1 X 3 = 3] [2 X 5 = 10] [1 X 2 = 2] [1 X 3 = 3] [2 X 5 = 10]
Assessment :	Formative	

Assessment Code :	A2	**Coverage of Content :**	All Units
Assessment Type :	Internal Exam	**Tentative Date :**	29/10/2018
Kind of Question Format:	Same as University format		
Assessment :	Summative		

Assessment Code :	A3	**Coverage of Content :**	All Units
Assessment Type :	Assignment		
Rules :	1. 20 (10 question+ 10 question given in each tutorial)questions from each unit will be given as assignment. 2. Questions will be given in every tutorial lecture. 3. 7 days will be given for assignment submission. 4. Zero marks will be given for submission after given deadline		
Assessment :	Formative		

Assessment Code :	A4	**Coverage of Content :**	All Units
Assessment Type :	Presentation/Viva		
Rules :	1. Topic should be given from the syllabus before 20 days of the presentation. 2. 15 minutes should be given for presentation 3. Viva should be taken after completion of presentation 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 :	Summative		

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

CO1: make use of the concept of normed space and Banach space in spectral theory and find the regular value, resolvent set and spectrum and recognize the properties of bounded linear operator and properties of resolvent and spectrum.

CO2: apply the spectral theorem for compact linear operator on normed spaces & Fredholm's alternative and analyse its properties of compact linear operators on normed space.

CO3: construct spectral theory for bounded self-adjoint linear operators on Hilbert space and categorize the spectral properties of bounded self-adjoint linear operators and use self-adjoint operator of Hilbert space to derive the positive operator, product of positive operator, monotone sequence, positive square root.

CO4: organize the concept of orthogonal complement of Hilbert space to derive the projection operators and recognize the properties of projection and familiar with spectral family and use it in spectral family of a bounded self-adjoint linear operator and identifies its properties.

CO5: Understand the concept of unbounded linear operator in Hilbert space and connect with differential equations and in quantum mechanics.

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	PO1	PO2	PO3	PO4
A1	✓	✓	✓	✓		✓	✓		✓
A2	✓	✓	✓	✓	✓	✓	✓	✓	
A3	✓	✓	✓	✓	✓		✓		✓
A4	✓	✓	✓	✓	✓	✓		✓	✓