MAR BASELIOS CHRISTIAN COLLEGE OF ENGINEERING & TECHNOLOGY

MBC

Kuttikkanam, Peermade, Idukki Dist, Kerala

COURSE DIARY

Program : B. TECH.

Course : PARTIAL DIFFERENTIAL EQUATIONS AND COMPLEX ANALYSIS Code : MAT 201

Branch : MECHANICAL ENGINEERING Batch : 2020 - 2024

Semester : THIRD Year : 2021

Name of Faculty : FATHIMA KALAM MADATHIL

Mobile No. : 8606272686

Designation : ASSISTANT PROFESSOR

Department : SCIENCE AND HUMANITIES DEPARTMENT

Institute Vision

An Engineering Institute with global quality to groom Competent Engineers equipped to address the changing needs of society.

Institute Mission

Our Efforts are dedicated for providing a learner centric education environment to:

* Provide value Based technical Learning
* Practical real world problem Solving
* Foster team work in Engineering design.
* Inspire innovations and R&D

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Name of Faculty	: FATHIMA KALAM MADATHIL
Mobile No.	: 8606272686
Designation	: ASSISTANT PROFESSOR
Department	: SCIENCE AND HUMANITIES DEPARTMENT
Signature	: Fathi

Schedule of works

Days	1	2	Break	3	4	Lunch Break	5	6	Break	7
Mon							ME			
Tue					ME					
Wed		ME								ME
Thu										
Fri							ME			

Course Plan

No.	Date	Day	Hr.	Topics to be Covered
31	10-01-2022	Monday	5	Problems on Second evaluation Method.
32	11-01-2022.	Tuesday	4	Contour Integrals, Cauchy Integral Theorem on Simply connected domain.
33	12-01-2022	Wednesday	2	Cauchy Integral Theorem on multiply connected domain Cauchy Integral formula.
34	12-01-2022.	Wednesday	7	Cauchy Integral formula for derivatives of an analytic function.
35	17-01-2022	Monday	5	Cauchy Integral Formula.
36	18-01-2022	Tuesday	4	Taylor's Series and Maclaurin's Series.
37	19-01-2022	Wednesday	2	MODULE V Laurent's Series.
38	19-01-2022	Wednesday	7	Laurent's Series.
39	21-01-2022.	Friday.	5	Zeroes of analytic functions. Singularities, Poles, Removable Singularities.
40	24-01-2022	Monday.	5	Essential Singularities and residues

Course Plan

No.	Date	Day	Hr.	Topics to be Covered
11	29-11-2021	Monday	5	Solution of wave equation with boundary and initial conditions - Fourier Series Method
12	30-11-2021	Tuesday	4	Fourier series method for solution of wave equation.
13	01-12-2021	Wednesday	2	D'Alembart's solution of the wave equation.
14	01-12-2021	Wednesday	7	One dimensional heat equation - derivation.
15	03-12-2021	Friday	5	Solution of heat Equation - by method of separation of variables.
16	06-12-2021	Monday	5	One-dimensional heat equation with boundary and initial conditions.
17	07-12-2021	Tuesday	4	Solution of heat equation - Using Fourier series Method.
18	08-12-2021	Wednesday	2	Fourier series method for solution of heat equation
19	08-12-2021	Wednesday	7	MODULE III. Complex function, limit, continuity.
20	10-12-2021	Friday	5	Complex function, limit, continuity, Real and imaginary part of complex functions

Course Plan

No.	Date	Day	Hr.	Topics to be Covered
21	13-12-2021	Monday	5	Complex functions - Derivative, analytic functions.
22	14-12-2021	Tuesday	4	Cauchy-Riemann Equations -
23	15-12-2021	Wednesday	2	Harmonic Functions.
24	15-12-2021	Wednesday	7	Finding Harmonic conjugate
25	17-12-2021	Friday	5	Conformal mappings. Mappings of $\omega = z^2$, $\omega = e^z$, $\omega = \frac{1}{z}$ $\omega = \sin(z)$.
26	20-12-2021	Monday	5	Linear Fractional transformation $\omega = \frac{1}{z}$, fixed points, critical points
27	21-12-2021	Tuesday	4	Transformation $\omega = \sin z$.
28	22-12-2021	Wednesday	2	MODULE IV Complex Integration, Line Integrals in Complex plane.
29	22-12-2021	Wednesday	7	Basic Properties. - First Evaluation Method - Indefinite Integration.
30	07-01-2022	Friday	5	Second Evaluation Method - Use of Representation of a Path

Program Educational Objectives (PEOs)

PEO:1. Work as a Competent Profesional in industry, government and academia

PEO:2. Lead a team adhering to ethical values.

PEO:3. Conversant with technological changes and contemporary scientific advances to address the societal needs.

PEO:4.

PEO:5.

Program Outcomes (POs)

Undergraduate engineering programmes are designed to prepare graduates to attain the following program outcomes:

PO:1. **Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO:2. **Problem Analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO:3. **Design / Development of Solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO:4. **Conduct Investigations of Complex Problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO:5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and

modelling to complex engineering activities with an understanding of the limitations.

PO:6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO:7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO:8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO:9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO:10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO:11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO:12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes (PSOs)

PSO:1. Model, design and analyse mechanical systems and components applying mathematical and scientific principles, taking into account the socio, economic, factors considering environmental implication.

PSO:2. Apply engineering principles to components and materials to develop innovative products.

PSO:3. Lead a team with innovative Mangerial skills and work profesionally.

Course Plan

No.	Date	Day	Hr.	Topics to be Covered
41	25-01-2022	Tuesday	4	Cauchy Residue Theorem
42	28-01-2022	Friday.	5	Evaluation of definite Integral using Residue Theorem.
43	31-01-2022.	Monday	5	Residue Integration of real integrals- Integrals of rational functions of Cos θ and Sin θ
44	01-02-2022	Tuesday	4	Integration of Improper Integrals with no poles on the real axis.
45	02-02-2022	Wednesday	2	Integrals of Improper integrals with no poles on the real axis.
46	02-02-2022	Wednesday	7	Revision
47	04-02-2022	Friday	5	Revision
48	07-02-2022	Monday	5	Revision
49	08-02-2022	Tuesday	4	Revision
50	09-02-2022	Wednesday	2	Revision.

Tutorial Details

No.	Date	Day	Hr.	No. of Students Attended	Remarks
1.	26/11/21	Friday	5	30	Module I

Topics Covered

Q:- Form PDE By Eliminating arbitrary Constants or arbitrary functions.

1) $z = ax + by + a^2 + b^2$ 2) $z = a^2x + b^2y + ab$ 3) $z = (x^2+a^2)(y^2+b^2)$

4) $z = ax + a^2y^2 + b$ 5) $x^2+y^2+(z-a)^2 = b^2$

Q:- Solve PDE: 1) $\tan z = p\tan x + q\tan y$

2) $(z^2 - 2zy - y^2)p + (xy + xz)q = xy - zx$.

Prof. Anie T

Name and Sig. of Additional Faculty 1

Prof Revathy G.

Name and Sig. of Additional Faculty 2

No.	Date	Day	Hr.	No. of Students Attended	Remarks
2.	6/12/21	Monday	5	30	Module I

Topics Covered

Q:- Find the differential Equation of all Spheres whose centre lies in xy-plane and having fixed radius.

Q:- Solve $x^2 \frac{\partial u}{\partial x} + y^2 \frac{\partial u}{\partial y} = 0$ by Method of Separation of variables.

Prof Anie T.

Name and Sig. of Additional Faculty 1

Prof Revathy G.

Name and Sig. of Additional Faculty 2

Tutorial Details

No.	Date	Day	Hr.	No. of Students Attended	Remarks
3	21/12/21	Tuesday	4	33	Module II

Topics Covered

* Solution of wave equation by Method of Separation of variables

* Solution by Fourier Series Method.

Prof. Anie T.
Name and Sig. of Additional Faculty 1

Prof. Revathy G
Name and Sig. of Additional Faculty 2

No.	Date	Day	Hr.	No. of Students Attended	Remarks
4.	17/1/22	Monday	5	25	Module III

Topics Covered

Q:- Show that $f(z) = \sin(z)$ is analytic $\forall z$ & find $f'(z)$

Q:- Is $f(z) = z\bar{z}$ analytic ?

Q:- Check Continuity of functions:-

Q:- Conformal mappings of function $w = e^z$

Prof. Anie T.
Name and Sig. of Additional Faculty 1

Prof Revathy G. Pai
Name and Sig. of Additional Faculty 2

Course Plan

No.	Date	Day	Hr.	Topics to be Covered
1	15-11-2021	Monday	5	MODULE I. Partial Differential Equations, Formation of PDE - Elimination of arbitrary constants.
2	16-11-2021	Tuesday	4	Formation of PDE - Elimination of arbitrary functions.
3	17-11-2021	Wednesday	2	Solution of Partial differential equation. Equations Solvable by direct Integration.
4	17-11-2021	Wednesday	7	Linear Equations of first order - Lagrange's linear equation.
5	19-11-2021	Friday	5	Solution of Non-linear equations of first order - Charpit's method.
6	22-11-2021	Monday	5	Charpit's Method.
7	23-11-2021	Tuesday	4	Boundary value Problems - Method of Separation of variables.
8	24-11-2021	Wednesday	2	Method of Separation of variables.
9	24-11-2021	Wednesday	7	MODULE II. One dimensional wave equation vibration of stretched string - derivation
10	26-11-2021	Friday	5	Solution of the wave equation using method of Separation of variables.

Course Outcomes (COs)	
CO:1.	Understand the Concept and Solution of Partial Differential Equation
CO:2.	Analyse and solve one-dimensional wave equation and heat equation.
CO:3.	Understand Complex functions, its continuity and differentiability with the use of Cauchy-Riemann Equations.
CO:4.	Evaluate Complex Integrals using Cauchy's Integral Theorem and Cauchy's Integral formula; understand the series expansion of analytic function.
CO:5.	Understand the series expansion of complex function about a singularity & apply residue theorem to compute several kinds of real Integrals.
CO:6.	

CO-PO Mapping [S: Strong (3), M: Medium(2), L: Low(1)]

(Subject Code)	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	3	3	3	2	1				2		2			
CO2	3	3	3	3	2	1				2		2			
CO3	3	3	3	3	2	1				2		2			
CO4	3	3	3	3	2	1				2		2			
CO5	3	3	3	3	2	1				2.		2			
CO6															

Tutorial Details

No.	Date	Day	Hr.	No. of Students Attended	Remarks
5	28/2/22	Monday	5	32	Module IV & V

Topics Covered

Q:- Evaluate $\int_0^{4+2i} \bar{z}\, dz$ along $z = t^2 + it$

Q:- Evaluate $\int_c \frac{2z-1}{z^2-z}\, dz$ along $|z| = 3$ using Cauchy's Integral formula

Q:- Find Laurent Series expansion of $f(z) = \frac{1}{z^2+3z+2}$ over $1<|z|<2$

Q:- Evaluate $\int_c \frac{e^z}{\cos(\pi z)}\, dz$ over $|z|=1$ using Residue Theorem

Q:- Find Singularities & Poles of ① $\frac{8}{1+z^2}$ ② $\tan z$

Prof. Anie T.
Name and Sig. of Additional Faculty 1

Prof. Revathy G.
Name and Sig. of Additional Faculty 2

No.	Date	Day	Hr.	No. of Students Attended	Remarks

Topics Covered

Name and Sig. of Additional Faculty 1

Name and Sig. of Additional Faculty 2

Details of Assignments

No	Date of announcement	Date of submission	Date of return after evaluation
1.	07-12-2021	13/12/2021	17/12/2021

Sl. No:	Assignment Statement	Marks	CO	*RBTL	PI
Q1	Formation of PDE by eliminating arbitrary constants and arbitrary functions	5	1	1	1.1.1 2.1.3
Q2	① Solution of linear PDE of 1st order ② Solution by Charpit's Method ③ Solution by direct integration.	5	1	3	1.1.1 2.1.3
Q3	Solution by method of separation of variables.	5	1	3	1.1.1 2.1.3

Signature of Faculty Member Signature of HoD / Program Coordinator

No	Date of announcement	Date of submission	Date of return after evaluation
2	05/02/2022	06/02/2022	8/02/2022

Sl. No:	Assignment Statement	Marks	CO	*RBTL	PI
Q1	① Evaluate $\int_C \operatorname{Re} z \, dz$; C: Shortest path from $1+i$ to $5+5i$ ② Evaluate $\int_0^{1+i} x-y+ix^2 \, dz$ along $y=x^2$.	5	4	3	1.1.1 2.1.3
Q2	Evaluate $\int_C \operatorname{Re} z^2 dz$ clockwise around the boundary of the square with vertices $0, i, 1+i, 1$	5	4	3	1.1.1 2.1.3
Q3	Evaluate $\int_C z^2 dz$ where C is the part of the unit circle going anticlockwise from $z=1$ to $z=i$.	5	4	3	1.1.1 2.1.3

Signature of Faculty Member Signature of HoD / Program Coordinator

* Revised Bloom's Taxonomy Level (Ref: Annexure 1)

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
5	I	23/11/21	Tuesday	4.	Lecture	32	1. Text-I

Topics Covered/Lesson Notes

Solving
Linear Equation of first order –
Lagrange's linear equation

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
6	I.	24/11/21	Wednesday	2	Lecture	30	1. Text-I

Topics Covered/Lesson Notes

* Solving PDE of first order
and
* Solution of PDE by direct Integration.

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
3	I	19/11/21	Friday	5	Lecture	28	1. Text-I

Topics Covered/Lesson Notes

* Formation of PDE by eliminating arbitrary constants
* Formation of PDE by eliminating arbitrary functions

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
4	I	22/11/21	Monday	5	Lecture	27	1. Text-I

Topics Covered/Lesson Notes

* Formation of PDE by eliminating arbitrary functions

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
7	I	24/11/21	Wednesday	7	Lecture	26	1. Text-I

Topics Covered/Lesson Notes

Solution of Non-linear PD Equation
Charpit's Method.

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
8	I	26/11/21	Friday	5	Lecture	30	1. Text-I

Topics Covered/Lesson Notes

Solution of Partial differential Equation
Charpit's method

* Tutorial I.

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
1.	I	17-11-2021	WED	2	Lecture	24	1. B.S Grewal, Higher Engineering Mathematics, Khanna Publishers, 44th Edition, 2018. - Text I.

Topics Covered/Lesson Notes

Syllabus Discussion

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
2	I.	17-11-2021	WED	7.	Lecture	24	1. Text I

Topics Covered/Lesson Notes

* Partial differential Equations
* Formation of PDE by eliminating arbitrary constants

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
9	I	1/12/21	Wednesday	2	Lecture	30	1. Text-I

Topics Covered/Lesson Notes

Boundary value Problems -
Method of Separation of variables

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
10	I	03/12/21	Friday	5	Lecture	27	1. Text-I

Topics Covered/Lesson Notes

Solution of PDE with boundary conditions
- Method of Separation of variables

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
11	II	03/12/21	Friday	6	Lecture	27	1. Text I

Topics Covered/Lesson Notes

Derivation of one-dimensional wave equation vibration of stretched string

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
12	II	06/12/21	Monday	5	Lecture	30	1. Text - I

Topics Covered/Lesson Notes

Solution of wave equation by Method of Separation of variables

* Tutorial 2

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
13	II	07/12/21	Tuesday	4.	Lecture	32	1. Text I

Topics Covered/Lesson Notes

Solution of wave equation with boundary and initial conditions
-Fourier Series Method

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
14	II	8/12/21	Wednesday	2	Lecture	31	1. Text I

Topics Covered/Lesson Notes

-Fourier Series Method for Solution of one-dimensional wave equation

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
15	II	8/12/21	Wednesday	7	Lecture	31	1. Text - I

Topics Covered/Lesson Notes

D' Alembert's Solution of wave Equation.

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
16	II	10/12/21	Friday	5	Lecture	17	1. Text - I

Topics Covered/Lesson Notes

Derivation of one-dimensional heat Equation.

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
17	II	13/12/21	Monday	5	Lecture	28	1. Text I

Topics Covered/Lesson Notes

Solution of one-dimensional heat equation by Method of Separation of variables

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
18	II	14/12/21	Tuesday	4.	Lecture	31	1. Text-I

Topics Covered/Lesson Notes

One-dimensional heat equation with boundary and initial conditions.

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
19	II	15/12/21	Wednesday	2	Lecture	28	1. Text I

Topics Covered/Lesson Notes

Solution of heat Equation
-Fourier Series method

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
20	II	15/12/21	Wednesday	7	Lecture	28	1. Text I

Topics Covered/Lesson Notes

Fourier Series Method for
one-dimensional heat equation

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
21	II	20/12/21	Monday	5	Lecture	32	1. Text I

Topics Covered/Lesson Notes

Discussion of more problems from Solving Wave equation and heat equation by Fourier Series Method.

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
22	II	21/12/21	Tuesday	4	Lecture	33	1. Text I

Topics Covered/Lesson Notes

* Fourier Series Solution of one-dimensional Wave and Heat Equation.
* Tutorial 3

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Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
25	III	07/1/22	Friday	5	Lecture	28	1. Text II

Topics Covered/Lesson Notes

* Complex functions - derivatives
* Analytic functions

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
26	III	10/1/22	Monday	5	Lecture	33	1. Text II

Topics Covered/Lesson Notes

* Cauchy Riemann Equations.

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
23	III	22/12/21	Wednesday	2	Lecture	23	1. Erwin Kreizig, Advanced Engineering Mathematics, 10th Edition, John Wiley and sons, 2016 - Text II

Topics Covered/Lesson Notes

Complex function, limit, continuity of complex functions.

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
24	III	22/12/21	Wednesday	7	Lecture	14	1. Text II

Topics Covered/Lesson Notes

* Finding real and imaginary parts of complex functions
* Derivatives of complex functions

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
27	III	11/1/22	Tuesday	4	Google meet	28	1. Text II

Topics Covered/Lesson Notes

* Cauchy - Riemann Equations.
* Harmonic Functions

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
28	III	12/1/22	wednesday	2.	Google meet	29	1. Text II

Topics Covered/Lesson Notes

* Harmonic functions and finding harmonic conjugates.
* Milne - Thompson Method

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
29	III	12/1/22	Wednesday	7	Google meet	22	1. Text II

Topics Covered/Lesson Notes

* Critical points
* Conformal mappings

Mapping of $w = z^2$

$w = e^z$

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
30	III	15/1/22	Saturday	5	Google meet	18	1. Text II

Topics Covered/Lesson Notes

* Conformal mappings of

$w = \frac{1}{z}$, $w = \sin z$

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
31	III	17/1/22	Monday	5	Google meet	25	1. Text II

Topics Covered/Lesson Notes

* More examples on conformal mappings.
* Tutorial 4.

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
32	III	18/1/22.	Tuesday	4	Google meet	29	1. Text II

Topics Covered/Lesson Notes

* Linear Transformation.
* Transformation of $w = \sin z$

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
33	III	19/1/22	Wednesday	2	Google meet	28	1. Text II

Topics Covered/Lesson Notes

* Linear fractional transformation

$w = \frac{1}{z}$

* Critical points, fixed points

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
34	III	19/1/22	Wednesday	7	Google meet	27	1. Text II

Topics Covered/Lesson Notes

* Finding Inverse of complex functions
Critical points, fixed points.

Somady
19/1/22

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
35	IV	21/1/22	Friday	5	Google meet	27	1. Text II

Topics Covered/Lesson Notes

Complex Integration -

Line Integrals in complex plane.

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
36	IV	22/1/22	Saturday	2	Google meet	31	1. Text II

Topics Covered/Lesson Notes

Basic Properties - First evaluation method. - Indefinite integration

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
37	IV	22/1/22.	Saturday	7	Google meet	32	1. Text II

Topics Covered/Lesson Notes

Second evaluation Method -
use of representation of a path

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
38	IV	24/1/22.	Monday	5	Google meet	23	1. Text II

Topics Covered/Lesson Notes

Second evaluation method -
use of representation of a path.

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
39	IV	28/1/22.	Friday	5	Google meet	28	1. Text II

Topics Covered/Lesson Notes

* Simple curve, closed curve, domains
* Contour Integrals
* Cauchy Integral Theorem

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
40	IV	29/1/22	Saturday	4	Google meet	28	1. Text II

Topics Covered/Lesson Notes

Cauchy Integral Theorem with examples in Simply connected domain.

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
41	IV	31/1/22	Monday	5	Google meet	28	1. Text II

Topics Covered/Lesson Notes

Cauchy Integral Formula and examples

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
42	IV	1/2/22	Tuesday	4	Google meet	29	1. Text II

Topics Covered/Lesson Notes

Cauchy's Integral formula for derivatives of analytic function

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
43	IV	2/2/22	Wednesday	2.	Google meet	30	1. Text II

Topics Covered/Lesson Notes

Cauchy's Integral formula

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
44	IV	3/2/22	Thursday	1	Google meet	30	1. Text II

Topics Covered/Lesson Notes

More problems on Cauchy's Integral formula

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
47	V	08/02/2022	Tuesday	4	Google Meet	29	1. Text II

Topics Covered/Lesson Notes

→ Laurent Series expansion.

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
48	V	9/2/22.	Wednesday	7	Lecture	30	1. Text II

Topics Covered/Lesson Notes

* Zeroes of analytic functions
* Singularities – Removable singularities, Poles and essential singularities.

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
49	V	11/2/22	Friday	5	Lecture	26	1. Text II

Topics Covered/Lesson Notes

* Residues at Poles.

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
50	V	21/2/22	Monday	2	Lecture	31	1. Text II

Topics Covered/Lesson Notes

* Cauchy Residue Theorem.

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
51	V	21/2/22	Monday	5	Lecture	29	1. Text II

Topics Covered/Lesson Notes

→ * More Problems on Cauchy's Residue Theorem

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
52	V	22/2/22	Tuesday	3	Lecture	29	1. Text II

Topics Covered/Lesson Notes

* Residue Integration of real integrals
- Evaluation of integrals of rational functions of $\cos\theta$ and $\sin\theta$.

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
53	V	22/2/22.	Tuesday	4	Lecture	31	1. Text II

Topics Covered/Lesson Notes

* More Problems on solving real integrals containing rational functions of Sinθ and Cosθ.

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
54.	V	23/2/22.	Wednesday	6	Lecture	~~28~~ 31	1. Text II

Topics Covered/Lesson Notes

* Residue Integration of real Integrals —
Improper Integrals of the form $\int_{-\infty}^{\infty} f(x)\,dx$ with no poles on real axis.

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
55	V	23/2/22	Wednesday	7	Lecture	28	1. Text II

Topics Covered/Lesson Notes

* Residue Integration of real Integrals
More Problems on Solving improper integrals.

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
56	V	25/2/22	Friday	5	Lecture	29	1. Text II

Topics Covered/Lesson Notes

* Revision of Module V

Vimala
25/2/22

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
57	IV	28/2/22	Monday	5	Lecture	32	1. Text II

Topics Covered/Lesson Notes

* Revision of Module IV
* Tutorial 5

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
58	III	2/3/22	Wednesday	2	Lecture	32	1. Text II

Topics Covered/Lesson Notes

Revision of Module III.

Subject Coverage

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
59	II	2/3/22	Wednesday	7	Lecture	32	1. Text II

Topics Covered/Lesson Notes

Revision of Module II

No.	Module	Date	Day	Hr.	Mode of Instruction	No. of Students Attended	References
60	I	04/3/22	Friday	5	Lecture	32	1. Text II

Topics Covered/Lesson Notes

Revision of Module I.

ICT Enabled Teaching Learning Details

No.	Date	Day	Hr.	No. of Students Attended	Remarks
1.	11/1/22	Tuesday	4	23	

Topics Covered

* Cauchy Riemann Equations
* Harmonic functions

No.	Date	Day	Hr.	No. of Students Attended	Remarks
2	12/1/22.	Wednesday	2	29	

Topics Covered

* Harmonic functions and finding harmonic Conjugates
* Milne - Thompson Method.

ICT Enabled Teaching Learning Details

No.	Date	Day	Hr.	No. of Students Attended	Remarks
3	15/1/22	Saturday	5	18	

Topics Covered

Conformal mappings of $w = \sin z$

$w = \frac{1}{z}$.

No.	Date	Day	Hr.	No. of Students Attended	Remarks
4	17/1/22	Monday	5	25	

Topics Covered

* More examples on conformal mappings

$w = e^z$, $w = \frac{1}{z}$, $w = \sin z$, $w = z^2$.

ICT Enabled Teaching Learning Details

No.	Date	Day	Hr.	No. of Students Attended	Remarks
5	19/1/22.	Wednesday	7	33.	

Topics Covered

* Finding inverse of Complex functions, critical points, fixed points.

No.	Date	Day	Hr.	No. of Students Attended	Remarks
6	21/1/22	Friday	5	27	

Topics Covered

* Complex Integration –
Line integrals in Complex plane.

Remedial Actions / Special Class Details

No.	Date	Day	Time	Mode of Instruction	No. of Students Attended
1.	4/3/22.	Friday	4-5 pm	Lecture.	4

Topics Covered/Lesson Notes

→ Module IV

* Cauchy's Integral Theorem

* Cauchy's Integral Formula.

No.	Date	Day	Time	Mode of Instruction	No. of Students Attended
2.	5/3/22.	Saturday	4-5 pm.	Lecture	4

Topics Covered/Lesson Notes

→ Module V

* Cauchy's Residue Theorem

* Residues at Poles

Innovative teaching Learning methods adopted

* Google classroom - Sharing of notes in pdf and carrying out tests in online platform
* Using of 'Keep Notes' application for presenting class
* Using 'Google Meet' as an online platform for taking class

Year Calendar

No	Date	Event	Remark
1.	15/11/21	Commencement of class	
2.	1/12/21	Course Committee Meeting.	
3.	4/12/21	1st Series Exam	
	11-2-2022	First internal audit completed	Gaurav
4.	17/2/22.	Second Series Examination.	
5	28/2/22.	53- days ends	
	31.3.2022	second internal audit completed	Gaurav

Demand
30/3/22

Result Analysis

	Test 1	Test 2	Test 3
No. of Students in the Roll List	33	33	
Total No. of students appeared for the exam	33	32	
No. of students passed	26	26	
No. of students failed	7	6	
No. of students absent	0	1	
Pass percentage	78.78%	81.25%	
No. of students with Score above 90%	1	1	
No. of students with score below 40%	7	6	
No. of students with score in between 40% and 90%	25	25	
Signature of Faculty Member	Fath	Fath	
Signature of the HoD with date			

SYLLABUS COVERAGE – MONITORING SHEET

Date of starting of the Course: 15-11-2021

Date of completion of Module		No. of hours Handled	Course file, Innovative teaching methodologies adopted, Assignments, tests-Remarks	Signature of HOD
M1	03/12/21	10	Assignment Module Test.	Damaly
M2	21/12/21	12	Tutorial	Damaly
M3	19/1/22	12	Module Test.	Damaly
M4	7/2/22	12	Assignment, Classes through Google Meet	Damaly
M5	25/2/22.	10	Tutorial.	Damaly.
M6				

Sl No	Roll No	University Reg. No	Name		1	2	3	4	5	6	7	8	9	10
				Date	17/11/21	17/11/21	19/11/21	22/11/21	23/11/21	24/11/21	24/11/21	26/11/21	1/12/21	3/12/21
				Hr	2	7	5	5	4	2	7	5	2	5
1		MBC20ME001	Aaron Alex Georgey.		x	x	x	x	x	a	x	x	x	x
2		MBC20ME002	Abhijith Vasudev.		x	x	x	x	x	x	a	a	a	a
3		MBC20ME003	Aby George		x	x	x	x	x	x	x	x	x	x
4		MBC20ME004	Alan G Johnson		a	a	x	x	x	x	x	x	x	x
5		MBC20ME005	Alan Shiju		x	x	x	a	x	x	x	x	a	x
6		MBC20ME006	Dhanesh T.		a	a	x	x	x	x	x	x	x	x
7		MBC20ME007	Dilan Thomas		x	x	a	x	x	a	a	x	x	x
8		MBC20ME008	Gecen Varghese Jacob		x	x	x	x	x	x	x	x	x	a
9		MBC20ME009	Jeevan Geevarghese Saji.		x	x	x	x	x	x	x	x	x	x
10		MBC20ME010	Jeevan George		a	a	x	x	x	x	x	x	x	x
11		MBC20ME011	Jerin k.		x	x	x	a	a	x	x	x	x	x
12		MBC20ME012	Jijo Francis.		x	x	x	x	x	a	a	x	x	x
13		MBC20ME013	Jino k. Thomas		a	a	x	x	x	x	x	x	x	x
14		MBC20ME014	Jiss John		x	x	x	x	x	x	x	x	x	x
15		MBC20ME015	Joel T Vinod		x	x	x	x	x	x	x	x	x	x
16		MBC20ME016	Jude Kurian		x	x	x	a	x	x	x	x	x	a
17		MBC20ME017	Manjith Manoharan		x	x	a	x	x	x	x	x	x	x
18		MBC20ME018	Mathew Joseph		x	x	x	x	x	x	x	x	x	x
19		MBC20ME019	Melbin Thomas		a	a	a	a	x	x	x	x	a	x
20		MBC20ME020	Midhu Manoj		x	x	x	x	x	x	x	x	x	x
21		MBC20ME021	Milan Sabu Joseph.		x	x	x	x	x	x	a	x	a	a
22		MBC20ME022	Milan Santhosh		x	x	x	x	x	x	a	x	x	x
23		MBC20ME023	Nikitha Boby		x	x	x	x	x	x	x	x	x	a
24		MBC20ME024	Ninju k. Moni.		x	x	x	x	x	x	x	x	x	x
25		MBC20ME025	Phily Paul Varghese		a	a	a	x	x	x	x	x	x	x
26		MBC20ME026	Prince Anil		x	x	x	x	x	x	x	x	x	a
27		MBC20ME027	P. Manikrishnan		x	x	x	a	x	x	x	a	x	x
28		MBC20ME028	Reshma Maria Varghese		x	x	x	x	x	x	x	x	x	x
29		MBC20ME029	Sanjay Vijayan		a	a	x	x	x	x	a	x	x	x
30		MBC20ME030	Sebin Sabu		a	a	a	a	x	x	a	a	x	x
31		MBC20ME031	Shane Issac Ben		x	x	x	x	x	x	x	x	x	x
32		MBC20ME032	Shibin Shaji		x	x	x	x	x	x	x	x	x	x
33		MBC20ME033	Shone Grigory Joy		a	a	x	x	x	x	x	x	x	x
34														
35														
No of Absentees					9	9	5	6	1	3	7	3	3	6
Initials of the Staff Member														

Sl No	Roll No	University Reg No	Name		36	37	38	39	40	41	42	43	44	45
				Date	22/1/22	22/1/22	24/1/22	28/1/22	29/1/22	31/1/22	1/2/22	2/2/22	3/2/22	5/2/22
				Hr	2	7	5	5	4	5	4	2	1	2
1		MBC20ME001	Aaron Alex Gregorgey		×	×	×	×	×	a	×	×	×	a
2		MBC20ME002	Abhijith Vasudev		×	×	×	×	×	×	×	×	×	×
3		MBC20ME003	Aby George		×	×	a	×	a	×	a	×	×	a
4		MBC20ME004	Alan G. Johnson		a	×	×	×	×	a	×	×	×	×
5		MBC20ME005	Alan Shiju		×	×	a	×	×	×	×	×	×	×
6		MBC20ME006	Dhanesh T		×	×	×	×	×	×	×	×	×	×
7		MBC20ME007	Dilan Thomas		×	×	a	a	×	×	~~a~~	~~a~~	~~a~~	~~a~~
8		MBC20ME008	Geeen Varghese Jacob		×	×	a	a	a	a	a	a	a	~~a~~
9		MBC20ME009	Jeevan Geevarghese Suji		×	×	×	×	×	×	×	×	×	a
10		MBC20ME010	Jeevan George		×	×	×	×	a	a	a	×	~~×~~	a
11		MBC20ME011	Jerin K.		×	×	a	×	×	×	×	a	×	a
12		MBC20ME012	Jijo Francis		×	×	a	×	a	×	×	×	×	a
13		MBC20ME013	Jino K. Thomas		×	×	×	×	×	×	×	×	×	×
14		MBC20ME014	Jis John		×	×	×	×	×	×	×	×	×	×
15		MBC20ME015	Joel T Vinod		×	×	a	a	×	×	×	a	×	a
16		MBC20ME016	Jude Kurian		×	×	×	×	×	×	×	×	×	~~a~~
17		MBC20ME017	Manjith Manoharan		×	×	×	×	×	×	×	×	×	×
18		MBC20ME018	Mathew Joseph		×	×	×	×	×	×	×	×	×	×
19		MBC20ME019	Melbin Thomas		a	~~a~~	a	a	~~a~~	×	×	~~a~~	~~a~~	~~a~~
20		MBC20ME020	Midhu Manoj		×	×	×	×	×	×	×	×	a	×
21		MBC20ME021	Milan Sabu Joseph		×	×	×	×	×	×	×	×	×	×
22		MBC20ME022	Milan Santhosh		×	×	×	×	×	×	×	×	a	×
23		MBC20ME023	Nikitha Boby		×	×	×	×	×	×	×	×	×	×
24		MBC20ME024	Ninju K. Moni		×	×	×	×	×	×	×	×	×	×
25		MBC20ME025	Philty Paul Varghese		×	a	×	×	×	×	×	×	×	×
26		MBC20ME026	Prince Anil		×	×	×	×	×	×	×	×	×	×
27		MBC20ME027	P Unnikrishnan		×	×	×	×	×	×	a	×	×	×
28		MBC20ME028	Reshma Maria Varghese		×	×	×	×	×	×	×	×	×	×
29		MBC20ME029	Sanjay Vijayan		×	×	×	a	a	×	×	×	×	×
30		MBC20ME030	Sebin Sabu		×	×	×	×	×	×	×	×	×	×
31		MBC20ME031	Shane Issac Ben		×	×	×	×	×	×	×	×	×	×
32		MBC20ME032	Shibin Shaji		×	×	a	×	×	a	×	×	×	×
33		MBC20ME033	Shone Grigory Joy		×	×	a	×	×	×	×	×	×	×
34														
35														
No of Absentees					2	1	10	5	5	5	4	3	3	7
Initials of the Staff Member														

46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70		
৭/২/২২	৪/২/২২	৯/২/২২	১১/২/২২	১৩/২/২২	১৫/২/২২	১৬/২/২২	১৭/২/২২	২৩/২/২২	২৩/২/২২	২৫/২/২২	২৬/২/২২	১/৩/২২	২/৩/২২	৪/৩/২২												Date
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x	x	x	x	x	x	x	x	x	x	a	x	x	x	x												2
x	x	x	x	x	a	a	a	a	a	a	a	a	a	a												3
x	x	a	a	x	x	x	a	x	x	x	x	x	x	x												4
a	a	x	x	x	x	x	x	x	x	x	x	a	x	x												5
x	x	x	x	a	x	x	x	x	x	a	x	x	x	x												6
x	x	x	x	x	x	x	x	x	x	x	x	x	x	x												7
x	x	x	x	x	x	x	x	x	x	x	x	x	x	x												8
x	x	x	x	a	x	a	x	x	x	x	x	x	x	x												9
x	x	x	x	x	x	x	x	x	x	x	x	x	x	x												10
x	x	x	a	x	a	x	x	x	x	x	x	x	x	x												11
x	x	x	a	x	x	x	x	x	x	a	x	x	x	x												12
x	a	x	x	x	x	x	x	x	x	x	x	x	x	x												13
x	x	x	x	x	x	x	x	x	x	x	x	x	x	x												14
x	x	x	x	x	a	a	a	x	x	x	x	x	x	x												15
x	x	x	x	x	x	x	x	x	x	x	x	x	x	x												16
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x	x	x	a	x	x	x	x	x	x	x	x	x	x	x												26
x	x	a	x	x	a	x	x	x	a	x	x	x	x	x												27
x	x	x	x	x	x	x	x	x	x	x	x	x	x	x												28
x	x	x	x	x	x	x	x	x	x	x	x	x	x	x												29
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a	x	x	a	x	x	x	x	a	a	x	x	x	x	x												32
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Department Vision

To be a Pioneer in, and renowned for, mechanical Engineering and research that addresses the dynamic Industry demands and Society needs

Department Mission

To Serve industrial and Societal needs through:

* Innovation and Excellence in teaching
* Maintaining scale of research facilities
* Academic environment meeting high ethical Standards
* Development and alliances with industry and alumni for the benefit of Standards.

11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	31	33	34	35	
3/12/21	6/12/21	7/12/21	8/12/21	8/12/21	10/12/21	13/12/21	14/12/21	15/12/21	15/12/21	20/12/21	21/12/21	22/12/21	22/12/21	7/1/22	10/1/22	11/1/22	12/1/22	12/1/22	15/1/22	17/1/22	18/1/22	19/1/22	19/1/22	21/1/22	Date
6	5	4	2	7	5	5	4	2	7	5	4	2	7	5	5	4	2	7	5	5	4	2	7	5	Hr
×	×	×	a	a	a	×	×	a	a	×	×	a	a	×	×	×	×	a	a	×	×	×	×	×	1
a	×	×	×	×	a	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	2
×	×	×	×	×	a	×	×	×	×	×	×	×	a	×	×	a	a	×	×	a	×	×	×	×	3
×	×	×	×	×	a	×	×	×	×	×	×	a	a	×	×	×	×	×	×	×	×	×	×	×	4
×	×	×	×	×	a	×	×	a	a	×	×	×	×	×	×	a	a	a	a	×	×	×	×	a	5
×	×	×	×	×	×	×	×	×	×	×	×	×	a	×	×	×	×	×	×	×	×	×	×	×	6
×	×	×	×	×	a	a	a	a	a	×	×	×	×	×	×	×	×	a	a	a	×	a	×	a	7
a	a	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	a	a	a	a	×	a	8
×	×	×	×	×	×	×	×	×	×	×	×	×	a	a	×	a	×	×	a	×	×	×	×	×	9
×	a	×	×	×	a	×	×	×	×	a	×	×	×	×	×	a	×	a	a	a	a	×	×	a	10
×	×	×	×	×	a	a	a	×	×	×	×	×	×	a	×	×	×	a	×	×	×	×	×	×	11
×	×	×	×	×	×	×	×	×	×	×	×	×	a	×	×	×	a	a	×	a	a	×	×	×	12
×	×	×	×	×	×	×	×	×	×	×	×	a	a	×	×	×	×	×	a	×	×	×	×	×	13
×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	14
×	×	×	×	×	×	×	×	×	×	×	×	a	a	×	×	×	a	a	a	a	×	a	×	a	15
a	a	a	a	a	a	a	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	16
×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	17
×	×	×	×	×	×	×	×	×	×	×	×	a	a	×	×	×	×	×	×	×	×	×	×	×	18
×	×	×	×	×	a	×	×	×	×	×	×	a	a	×	×	×	×	×	a	a	a	a	×	×	19
×	×	×	×	×	a	×	×	×	×	×	×		a	a	×	×	×	×	a	×	×	×	×	×	20
a	×	×	×	×	a	×	×	×	×	×	×	a	a	×	×	×	×	×	×	×	×	×	×	×	21
×	×	×	×	×	×	×	×	×	×	×	×	a	a	×	×	×	×	a	×	×	×	×	×	×	22
a	×	×	×	×	×	×	×	×	×	×	×	a	a	×	×	×	×	×	a	×	×	×	×	×	23
×	×	×	×	×	a	a	×	a	a	×	×	×	×	×	×	×	×	×	a	a	×	×	×	×	24
×	×	×	×	×	×	×	×	×	×	×	×	×	×	a	×	×	×	×	×	×	×	×	×	×	25
a	×	×	×	×	×	×	×	×	×	×	×	a	a	×	×	×	×	a	×	×	×	×	×	×	26
×	×	×	×	×	a	a	×	×	×	×	×	×	a	a	×	a	×	×	×	×	×	×	×	×	27
×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	28
×	×	×	×	×	a	×	×	a	a	×	×	×	a	×	×	×	×	a	a	×	×	×	×	a	29
×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	a	a	×	×	a	×	×	30
×	×	×	×	×	a	×	×	×	×	×	×	×	a	×	×	×	×	×	×	×	×	×	×	×	31
×	×	×	×	×	×	×	×	×	×	×	×	×	a	×	×	×	×	×	a	×	×	×	×	×	32
×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	33
																									34
																									35
6	3	1	2	2	16	5	2	5	5	1	0	10	19	5	0	5	4	11	15	8	4	5	0	6	Ab
																									Ini

Sl No	Roll No	University Reg No	Name	ATTENDANCE Total No of Periods: 60		
				No of Periods Attended	Attendance Percentage	Marks for Attendance (X) out of 10
1		MBC 20ME001	Aaron Alex Georgey	48	80	8
2		MBC20ME002	Abhijith Vasudev	53	88	9
3		MBC20ME003	Aby George	41	75	7
4		MBC20ME004	Alan G Johnson	50	84	8
5		MBC20ME005	Alan Shiju	46	76	7
6		MBC20ME006	Dhanesh T.	55	91	10
7		MBC20ME007	Dilan Thomas	45	75	7
8		MBC20ME008	Gecen Varghese Jacob	45	75	7
9		MBC20ME009	Jeevan Geevarghese Suji	53	88	9
10		MBC20ME010	Jeevan George	45	75	7
11		MBC20ME011	Jerin K.	48	80	8
12		MBC20ME012	Jijo Francis	48	80	8
13		MBC20ME013	Jino K. Thomas	54	90	10
14		MBC20ME014	Jiss John	60	100	10
15		MBC20ME015	Joel T Vinod	45	75	7
16		MBC20ME016	Jude Kurian	51	85	9
17		MBC20ME017	Manjith Manoharan	57	95	10
18		MBC20ME018	Mathew Joseph	58	97	10
19		MBC20ME019	Melbin Thomas	45	75	7
20		MBC20ME020	Midhu Manoj	54	90	10
21		MBC20ME021	Milan Sabu Joseph	52	87	9
22		MBC20ME022	Milan Santhosh	54	90	10
23		MBC20ME023	Nikitha Boby	55	91	10
24		MBC20ME024	Ninju K. Moni	50	83	8
25		MBC20ME025	Phily Paul Varghese	55	91	10
26		MBC20ME026	Prince Anil	54	90	10
27		MBC20ME027	P. Unnikrishnan	49	81	8
28		MBC20ME028	Reshma Maria Varghese	60	100	10
29		MBC20ME029	Sanjay Vijayan	48	80	8
30		MBC20ME030	Sebin Sabu	51	85	9
31		MBC20ME031	Shane Issac Ben	57	95	10
32		MBC20ME032	Shibin Shaji	50	86	9
33		MBC20ME033	Shone Grigory Joy	57	95	10
34						
35						
Initials of the Staff Member						

Assignments						Tests							
1	2	3	4	5		1	2	3					
Marks out of 15	Marks out of 15	Marks out of	Marks out of	Marks out of	Marks (Y) out of 15	Marks out of 25	Marks out of 25	Marks out of	Marks (Z) out of 25	Total (X+Y+Z) out of 50	Internal Submitted to University	Remarks	Sl. No
15	14				14.5	5.5	18.5		12	34.5	35		1
15	14				14.5	7.5	15		11.25	34.75	35		2
–	–				0	1	Ab		0.5	8	8		3
15	15				15	10	12.5		11.25	34.75	35		4
15	14				14.5	11	16		13.5	35	35		5
15	14				14.5	10	10		10	34.5	35		6
15	–				7.5	11	22		16.5	30	30		7
15	14				14.5	10	16		13	34.5	35		8
15	14				14.5	10.5	11		10.75	34.75	35		9
15	14				14.5	11.5	15		13.25	34.75	35		10
15	14				14.5	10	10		10	35	35		11
15	14				14.5	10.5	14		12.25	34.75	35		12
15	14				14.5	12	9		10.5	35	35		13
15	15				15	13	14.5		13.75	38.75	39		14
15	14				14.5	10.5	15		12.75	34.25	35		15
15	15				15	6	15		10.5	34.5	35		16
15	15				15	7.5	12.5		10	35	35		17
15	15				15	12	12.5		12.25	37.25	38		18
15	14				14.5	10.5	15		12.75	34.5	35		19
15	15				15	11	8		9.5	34.5	35		20
15	14				14.5	11	12		11.5	35	35		21
15	15				15	12	7.5		9.75	34.75	35		22
15	15				15	9	10		9.5	34.5	35		23
15	15				15	12.5	10		11.25	34.5	35		24
15	15				15	21	22.5		21.75	46.75	47		25
15	14				14.5	12.5	8.5		10.5	35	35		26
15	15				15	10.5	12.5		11.5	34.5	35		27
15	15				15	9.5	9.5		9.5	34.5	35		28
15	14				14.5	10.5	12.5		11.5	34.5	35		29
15	14				14.5	10	12.5		11.25	34.75	35		30
15	15				15	12.5	7.5		10	35	35		31
15	15				15	10	11.5		10.75	34.75	35		32
15	15				15	16	18		17	42	42		33
													34
													35