

A collaborative LaTeX document

Class of ID2090, Third Trimester of 2021 batch

June 14, 2022

Contents

1	Introduction	3
2	AE21B003	4
3	AE21B028	5
4	AE21B045	6
5	AE21B056	7
6	AE21B062	8
7	AE21B107	9
8	BE21B016	10
9	BE21B040	11
10	CE19B020	12
11	CE21B021	13
12	CE21B088	14
13	CE21B097	15
14	CE21B112	16
15	CE21B115	17
16	CH21B067	18
17	CH21B079	19
18	CH21B101	20
19	ME21B050	21
20	ME21B060	22
21	ME21B065	23

22 ME21B079	24
22.1 Maxwell Equation	24
22.2 Faraday's Law	24
22.3 Ampère's Law	24
22.4 Gauss Law	24
22.5 Colomb's Law	24
22.6 Expansion of variables	25
23 ME21B088	26
24 ME21B091	27
25 ME21B186	28
26 ME21B190	29
27 ME21B196	30
28 ME21B204	31
29 ME21B217	32
30 MM21B012	33
31 MM21B024	34
32 MM21B032	35
33 MM21B044	36
34 MM21B046	37
35 MM21B059	38
36 MM21B063	39
37 NA21B002	40
38 NA21B005	41
39 NA21B006	42
40 NA21B007	43
41 NA21B020	44
42 NA21B048	45
43 NA21B052	46
44 Conclusions	47
45 References	47

List of Figures

List of Tables

1 Introduction

This file includes tex files from the folders of each student. The students are expected to update the file named after their roll number and place any images in the same folder. Students do not have to edit this master document. Once the student has sent a pull request which is accepted and processed successfully, his/her assignment submission is deemed to be complete.

You are also welcome to add references and cite them. Examples on how to do that are on the course repository [?].

2 AE21B003

Student shall edit this file and include stuff for the assignment

3 AE21B028

Student shall edit this file and include stuff for the assignment

4 **AE21B045**

Student shall edit this file and include stuff for the assignment

5 AE21B056

Student shall edit this file and include stuff for the assignment

6 AE21B062

Student shall edit this file and include stuff for the assignment

7 AE21B107

Student shall edit this file and include stuff for the assignment

8 BE21B016

Student shall edit this file and include stuff for the assignment

9 BE21B040

Student shall edit this file and include stuff for the assignment

10 CE19B020

Student shall edit this file and include stuff for the assignment

11 CE21B021

Student shall edit this file and include stuff for the assignment

12 CE21B088

Student shall edit this file and include stuff for the assignment

13 CE21B097

Student shall edit this file and include stuff for the assignment

14 CE21B112

Student shall edit this file and include stuff for the assignment

15 CE21B115

Student shall edit this file and include stuff for the assignment

16 CH21B067

Student shall edit this file and include stuff for the assignment

17 CH21B079

Student shall edit this file and include stuff for the assignment

18 CH21B101

Student shall edit this file and include stuff for the assignment

19 ME21B050

Student shall edit this file and include stuff for the assignment

20 ME21B060

Student shall edit this file and include stuff for the assignment

21 ME21B065

Student shall edit this file and include stuff for the assignment

22 ME21B079

22.1 Maxwell Equation



Faraday's law

$$\frac{\partial \mathcal{D}}{\partial t} = \nabla \times \mathcal{H}$$

Ampère's Law

$$\frac{\partial \mathcal{B}}{\partial t} = -\nabla \times \mathcal{E}$$

Gauss Law

$$\nabla \cdot \mathcal{B} = 0,$$

Colomb's Law

$$\nabla \cdot \mathcal{D} = \rho_v$$

22.2 Faraday's Law

When the magnetic flux linking a circuit changes, an electromotive force is induced in the circuit proportional to the rate of change of the flux linkage.

22.3 Ampère's Law

The magnetic field created by an electric current is proportional to the size of that electric current with a constant of proportionality equal to the permeability of free space

22.4 Gauss Law

Gauss's law for magnetism states that the magnetic flux \mathcal{B} across any closed surface is zero

22.5 Colomb's Law

The closed line integral of magnetic field vector is always equal to the total amount of scalar electric field enclosed within the path of any shape

22.6 Expansion of variables

'Symbol'	'Expansion'
D	The volume of electric charge density
B	The magnetic field
E	The electric field
H	Magnetic field strength
ρ	Free Charge Density

23 ME21B088

Student shall edit this file and include stuff for the assignment

24 ME21B091

Student shall edit this file and include stuff for the assignment

25 ME21B186

Student shall edit this file and include stuff for the assignment

26 ME21B190

Student shall edit this file and include stuff for the assignment

27 ME21B196

Student shall edit this file and include stuff for the assignment

28 ME21B204

Student shall edit this file and include stuff for the assignment

29 ME21B217

Student shall edit this file and include stuff for the assignment

30 MM21B012

Student shall edit this file and include stuff for the assignment

31 MM21B024

Student shall edit this file and include stuff for the assignment

32 MM21B032

Student shall edit this file and include stuff for the assignment

33 MM21B044

Student shall edit this file and include stuff for the assignment

34 MM21B046

Student shall edit this file and include stuff for the assignment

35 MM21B059

Student shall edit this file and include stuff for the assignment

36 MM21B063

Student shall edit this file and include stuff for the assignment

37 NA21B002

Student shall edit this file and include stuff for the assignment

38 NA21B005

Student shall edit this file and include stuff for the assignment

39 NA21B006

Student shall edit this file and include stuff for the assignment

40 NA21B007

Student shall edit this file and include stuff for the assignment

41 NA21B020

Student shall edit this file and include stuff for the assignment

42 NA21B048

Student shall edit this file and include stuff for the assignment

43 NA21B052

Student shall edit this file and include stuff for the assignment

44 Conclusions

If this master tex file could be compiled successfully, it means that the class has learnt the concepts of Git as well as LaTeX properly.

45 References

References

- [1] Repository for id2090 course. <https://github.com/gphanikumar/mm2090>. Accessed: 2022-06-13.