



# SASURIE COLLEGE OF ENGINEERING

Approved by AICTE, New Delhi. Affiliated to Anna University, Chennai

Near NH544, Coimbatore Bypass, Near Vijayamangalam Tollgate, Tirupur 638056

## NAAC DOCUMENTS

### QUALITY INDICATOR FRAME WORK

#### CRITERION - 1

#### CURRICULAR ASPECTS

SUBMITTED BY

# IQAC

INTERNAL QUALITY ASSURANCE CELL

## SASURIE COLLEGE OF ENGINEERING



Criterion 1	Curricular Aspects	100
-------------	--------------------	-----

### 1.1 Curricular Planning and Implementation (20)

1.1.1 The Institution ensures effective curriculum planning and delivery through a well-planned and documented process including Academic calendar and conduct of continuous internal Assessment

#### Table of Contents

S.No	Description
1	Contents - Course File
2	Class Time Table
3	Students Name List
4	Syllabus
5	Lesson Plan
6	Subject Information Record
7	Test Plan for Subject
8	Result Analysis of Test
9	Corrective Action
10	Quality Objective Monitoring Record
11	Test Question Paper
12	Test Answer Sheet
13	Assignment Question Paper
14	Assignment Answer Sheet





Department: ECE / Subject Code & Name: EC3353 / Electronic Devices and Circuits / Class & Batch: II / 2021 - 2025 / Semester: III

CONTENTS - COURSE FILE

REMARKS

Table with 3 columns: S.NO, PARTICULARS, REMARKS. Rows include Time Table, Student name list, Subject Information Record, Syllabus, Lesson Plan, Test Plan for the Subject, Result Analysis, Corrective Action Report, Quality objective monitoring record, Internal test mark sheet Consolidated, Internal test question paper, Model question paper with answer key, Sample Answer paper for all test (Min-5), Content beyond the syllabus, Tutorial Class - schedule and content, Assignment - schedule and paper, PPT - handout, Video - Animation - Soft copy, Question bank, Sample university question papers (min 5 QP-recent exam), Personal Log book - Updated, Lecture Note, Special Class if any. Approval letter. Schedule. content covered.

Prepared By: V. Ganesan / Approved By: [Signature] / Name: MT. V. GOPALAKRISHNAN / Faculty

Dr. M. VIJAYAKUMAR ME., Ph.D., PRINCIPAL, SASURIE COLLEGE OF ENGINEERING, Vijayamangalam - 636 046, TN

SASURIE College of Engineering Vijayamangalam - 636 046, TN



CLASS TIME TABLE - Academic year 2022-23 ODD Sem

w.e.f : 22.08.22

Department : ECE

Year&Sem: II&III

Name of the faculty : Mr. V.GOPALAKRISHNAN - AP / ECE

HOUR	I	II	11.00a.m. TO 11.10 a.m.	III	IV	12.40 p.m. TO 1.20 p.m.	V	VI	2.40 p.m. TO 2.50p.m.	VII	VIII	
DAY/ TIME	09.30a.m. TO 10.15 a.m.	10.15a.m. TO 11.00a.m.		11.10 a.m. TO 11.55 a.m.	11.55 a.m. TO 12.40p.m.		1.20 p.m. TO 2.00p.m.	2.00 p.m. TO 2.40p.m.		2.50 p.m. TO 3.35 p.m.	3.35 p.m. TO 4.20 p.m.	
MONDAY			BREAK			LUNCH		EDC	BREAK			
TUESDAY								EDC				
WEDNESDAY							EDC					
THURSDAY		EDC										
FRIDAY												
SATURDAY										EDC		EDC

S.No.	Subject Code	Name of the Subject	Class	No. of Hours
1	EC3353	ELECTRONIC DEVICES AND CIRCUITS	Mr.V.GOPALAKRISHNAN AP/ECE	6
TOTAL				6

Prepared by	Verified by	Authorized by
<i>V. Gopalakrishnan</i>	<i>T. Manickam</i>	<i>Dr. M. Vijayakumar</i>
Mr.V.GOPALAKRISHNAN	Prof.T.MANICKAM	Dr.M.VIJAYAKUMAR
FACULTY	HOD Head of ECE Department	PRINCIPAL

**SASURIE**  
College of Engineering  
Vijayamangalam Tiruppur-638 058

*Me*

**Dr.M.VIJAYAKUMAR** ME., Ph.D.,  
PRINCIPAL  
**SASURIE COLLEGE OF ENGINEERING.**  
Vijayamangalam - 638 056, Tirupur (TN)



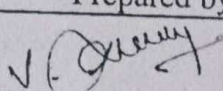
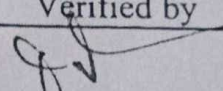
Academic Year 2022 - 2023 ODD Semester

STUDENT NAME LIST

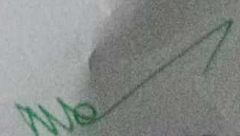
Department : Electronics and Communication Engineering

Subject : EC 3353-Electronic Devices and Circuits

Sl. No	REGISTER NO.	NAME OF THE STUDENT	HOSTEL/DAYSCHOLER
1	732421106001	GOKUL.S	D
2	732421106002	ROKESH.P	D
3	732421106003	SABARI JOTHIS	D

	Prepared by	Verified by
SIGN		
NAME	Mr.V.GOPALAKRISHNAN	Prof.T.MANICKAM
	FACULTY	HOD

Head of ECE Department  
**SASURIE**  
College of Engineering  
Vijayamangalam Tiruppur-638 056

  
Dr.M.VIJAYAKUMAR ME., Ph.D.,  
PRINCIPAL  
SASURIE COLLEGE OF ENGINEERING,  
Vijayamangalam - 638 056, Tirupur (Dt).



## SYLLABUS

### EC3353- ELECTRONIC DEVICES AND CIRCUITS

#### COURSE OBJECTIVES :

- To give a comprehensive exposure to all types of devices and circuits constructed with discrete components. This helps to develop a strong basis for building linear and digital integrated circuits
- To analyze the frequency response of small signal amplifiers
- To design and analyze single stage and multistage amplifier circuits. To study about feedback amplifiers and oscillators principles
- To understand the analysis and design of multi vibrators.

#### UNIT I SEMICONDUCTOR DEVICES

9

PN Junction diode, Zener diode, BJT, MOSFET, UJT –structure, operation and V-I characteristics, diffusion and transition capacitance - Rectifiers – Half Wave and Full Wave Rectifier, Zener as regulator .

#### UNIT II AMPLIFIERS

9

Load line, operating point, biasing methods for BJT and MOSFET, BJT small signal model – Analysis of CE, CB, CC amplifiers- Gain and frequency response –MOSFET small signal model– Analysis of CS, CG and Source follower – Gain and frequency response- High frequency analysis.

#### UNIT III MULTISTAGE AMPLIFIERS AND DIFFERENTIAL AMPLIFIER

9

Cascode amplifier, Differential amplifier – Common mode and Difference mode analysis – MOSFET Input stages – tuned amplifiers – Gain and frequency response – Neutralization methods.

#### UNIT IV FEEDBACK AMPLIFIERS AND OSCILLATORS

9

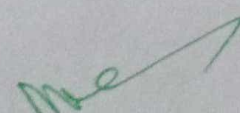
Advantages of negative feedback – Voltage / Current, Series, Shunt feedback Amplifiers – positive feedback–Condition for oscillations, phase shift – Wien bridge, Hartley, Colpitts and Crystal oscillators.

#### UNIT V POWER AMPLIFIERS AND DC/DC CONVERTERS

9

Power amplifiers- class A-Class B-Class AB-Class C-Power MOSFET-Temperature Effect- Class AB Power amplifier using MOSFET –DC/DC convertors – Buck, Boost, Buck-Boost analysis and design.

Head of ECE Department  
**SASURIE**  
College of Engineering  
Vijayamangalam, Tirupur - 638 056

  
Dr. M. VIJAYAKUMAR M.E., Ph.D.,  
PRINCIPAL  
SASURIE COLLEGE OF ENGINEERING,  
Vijayamangalam - 638 056, Tirupur (Dt).



**LESSON PLAN**

Faculty Name : Mr. V.GOPALAKRISHNAN  
 Department : ECE  
 Subject / Code : EC 3353 - ELECTRONIC DEVICES AND CIRCUITS  
 Academic Year : 2022-2023(ODD)

Designation: Assistant Professor  
 Semester/ Year: III / II

S.No.	Proposed		Details of Topic Covered	TA	Ref.	Actual		HOD sign
	Date	Period				Date	Period	
<b>UNIT I - SEMICONDUCTOR DEVICES</b>								
1	10.08.2022	8	PN junction diode and Zener diode.	1	1	22.08.22	6	
2	11.08.2022	5	BJT-structure,operation and V-I characteristics.	1	1	22.08.22	5	
3	11.08.2022	6	MOSFET-structure,operation and V-I characteristics.	1	1	23.08.22	5	
4	12.08.2022	3	UJT-structure,operation and V-I characteristics.	1	1	23.08.22	5	
5	13.08.2022	4	Diffusion.	1	1	24.08.22	4	
6	16.08.2022	5	Transition capacitance.	1	1	24.08.22	4	
7	16.08.2022	6	Rectifiers.	1	1	25.08.22	2	
8	17.08.2022	8	Half wave and full wave rectifiers.	1	1	25.08.22	2	18/8/22
9	18.08.2022	5	Zener as regulator.	1	1	26.08.22	4	
<b>UNIT II - AMPLIFIERS</b>								
10	22.08.2022	1	Load line and operating point.	1	1	27.08.22	6	
11	23.08.2022	5	Biasing methods for BJT and MOSFET.	1	1	27.08.22	5	
12	23.08.2022	6	BJT small signal model.	1	1	27.08.22	7	
13	24.08.2022	8	Analysis of CE,CB,CC amplifiers.	1	1	29.08.22	6	
14	25.08.2022	5	Gain and frequency response.	1	1	29.08.22	6	
15	26.08.2022	3	MOSFET small signal model.	1	1	29.08.22	6	
16	27.08.2022	4	Analysis of CS,CG and source follower.	1	1	29.08.22	5	
17	29.08.2022	1	Gain and frequency response.	1	1	29.08.22	5	30/8/22
18	30.08.2022	5	High frequency response.	1	1	30.08.22	5	
<b>UNIT - III MULTISTAGE AMPLIFIERS AND DIFFERENTIAL AMPLIFIERS</b>								
19	01.09.2022	5	Cascode amplifier.	1	1	01.09.22	5	
20	02.09.2022	3	Differential amplifier.	1	1	02.09.22	3	
21	05.09.2022	1	Common mode analysis.	1	1	05.09.22	1	
22	06.09.2022	5	Difference mode analysis.	1	1	06.09.22	5	
23	07.09.2022	8	MOSFET input stage.	1	1	07.09.22	8	



### LESSON PLAN

Faculty Name : Mr. V.GOPALAKRISHNAN  
 Department : ECE  
 Subject / Code : EC 3353 - ELECTRONIC DEVICES AND CIRCUITS  
 Academic Year : 2022-2023(ODD)

Designation: Assistant Professor  
 Semester/ Year: III / II

S.No.	Proposed		Details of Topic Covered	TA	Ref.	Actual		HOD sign
	Date	Period				Date	Period	
<b>UNIT I - SEMICONDUCTOR DEVICES</b>								
1	10.08.2022	8	PN Junction diode and Zener diode.	1	1	22.08.22	6	
2	11.08.2022	5	BJT-structure,operation and V-I characteristics.	1	1	22.08.22	5	
3	11.08.2022	6	MOSFET-structure,operation and V-I characteristics.	1	1	22.08.22	5	
4	12.08.2022	3	UJT-structure,operation and V-I characteristics.	1	1	23.08.22	5	
5	13.08.2022	4	Diffusion.	1	1	24.08.22	4	
6	16.08.2022	5	Transition capacitance.	1	1	24.08.22	4	
7	16.08.2022	6	Rectifiers.	1	1	25.08.22	2	
8	17.08.2022	8	Half wave and full wave rectifiers.	1	1	25.08.22	2	18/8/22
9	18.08.2022	5	Zener as regulator.	1	1	26.08.22	4	
<b>UNIT II - AMPLIFIERS</b>								
10	22.08.2022	1	Load line and operating point.	1	1	27.08.22	6	
11	23.08.2022	5	Biasing methods for BJT and MOSFET.	1	1	27.08.22	5	
12	23.08.2022	6	BJT small signal model.	1	1	27.08.22	7	
13	24.08.2022	8	Analysis of CE,CB,CC amplifiers.	1	1	29.08.22	6	
14	25.08.2022	5	Gain and frequency response.	1	1	29.08.22	6	
15	26.08.2022	3	MOSFET small signal model.	1	1	29.08.22	6	
16	27.08.2022	4	Analysis of CS,CG and source follower.	1	1	29.08.22	5	
17	29.08.2022	1	Gain and frequency response.	1	1	29.08.22	5	30/8/22
18	30.08.2022	5	High frequency response.	1	1	30.08.22	5	
<b>UNIT - III MULTISTAGE AMPLIFIERS AND DIFFERENTIAL AMPLIFIERS</b>								
19	01.09.2022	5	Cascode amplifier.	1	1	01.09.22	5	
20	02.09.2022	3	Differential amplifier.	1	1	02.09.22	3	
21	05.09.2022	1	Common mode analysis.	1	1	05.09.22	1	
22	06.09.2022	5	Difference mode analysis.	1	1	06.09.22	5	
23	07.09.2022	8	MOSFET input stage.	1	1	07.09.22	8	



Faculty Name : Mr. V.GOPALAKRISHNAN  
 Department : ECE  
 Subject / Code : EC 3333 - ELECTRONIC DEVICES AND CIRCUITS  
 Academic Year : 2022-2023(ODD)

Designation: Assistant Professor  
 Semester/ Year: III / II

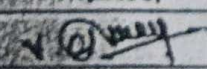
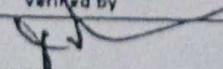
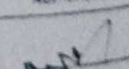
S.No.	Proposed		Details of Topic Covered	TA	Ref.	Actual			
	Date	Period				Date	Period	Remarks	
24	08.09.2022	5	Tuned amplifiers.	1	1	08.09.22	5		
25	10.09.2022	4	Single tuned amplifiers.	1	1	10.09.22	4		
26	13.09.2022	5	Gain and frequency response.	1	1	13.09.22	5		
27	13.09.2022	6	Neutralization methods.	1	1	13.09.22	6		
<b>UNIT IV - FEEDBACK AMPLIFIERS AND OSCILLATORS</b>									
28	14.09.2022	8	Advantages of negative feedback.	1	1	14.09.22	8		
29	15.09.2022	5	Voltage and current series feedback amplifiers.	1	1	15.09.22	5		
30	16.09.2022	3	Voltage and current shunt feedback amplifiers.	1	1	16.09.22	3		
31	19.09.2022	1	Positive feedback.	1	1	19.09.22	1		
32	20.09.2022	6	Condition for oscillations.	1	1	20.09.22	6		
33	28.09.2022	8	Phase shift oscillator.	1	1	28.09.22	8		
34	29.09.2022	5	Wien bridge oscillator.	1	1	29.09.22	5		
35	30.09.2022	3	Hartley and colpitts oscillator.	1	1	30.09.22	3		
36	01.10.2022	4	Crystal oscillators.	1	1	01.10.22	4		
<b>UNIT V - POWER AMPLIFIERS AND DC/DC CONVERTERS</b>									
37	06.10.2022	5	Power amplifiers.	1,3	2	06.10.22	5		
38	07.10.2022	3	Class A and class B amplifiers.	1	2	07.10.22	3		
39	08.10.2022	4	Class AB and class C amplifiers.	1	2	08.10.22	4		
40	10.10.2022	1	Power MOSFET.	1,3	2	10.10.22	1		
41	11.10.2022	5	Temperature effect.	1,3	2	11.10.22	5		
42	19.10.2022	8	Class AB power amplifier using MOSFET.	1,3	2	19.10.22	8		
43	20.10.2022	5	DC/DC convertors.	3	2	20.10.22	5		
44	26.10.2022	8	Buck boost.	3	2	26.10.22	8		
45	27.10.2022	3	Buck boost analysis and design.	3	2	27.10.22	3		

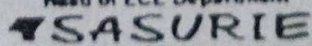
**Reference books (Ref):**

1. Donald A. Neamen, "Electronic circuit analysis and design", Tata McGraw hill, 3rd edition, 2010
2. D. Schilling and C. Belove, "Electronic circuits", McGraw hill, 3rd edition, 1989
3. Muhammad H. Rashid, "Power electronics", Pearson Education / PHI, 2004

**Teaching Aids (TA):**

1. Black Board with Chalk
2. Overhead Projector
3. LCD Projector

Prepared by	Verified by	Authorized by
 Mr. V. GOPALAKRISHNAN	 Mr. T. MANICKAM	 Dr. M. VIJAYAKUMAR
Faculty	HD	Principal

Head of ECE Department  
  
 SASURIE  
 College of Engineering  
 Vijayamangalam Tiruppur - 638 056

Rev 0.0

Dr. M. VIJAYAKUMAR M.E., Ph.D.,  
 PRINCIPAL  
 SASURIE COLLEGE OF ENGINEERING,  
 Vijayamangalam - 638 056, Tirupur (Dt).



SUBJECT INFORMATION RECORD

Department : ECE

Subject : Electronic Devices and Circuits.

Year : II

Semester : III

Last year handled by : -

Percentage of Result (last year) : -

Quality Objectives : To produce more than 90% result in Anna university exam

Reference Book:

1. David. A. Bell "Electronic Devices and Circuits" Oxford higher education press "5<sup>th</sup> edition 2010
2. T. Joel. Muhammed Rashid "power electronics" Pearson education.

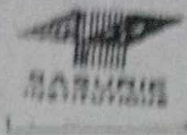
	Prepared By	Approved By
Sign:	<i>V. GopalaKrishnan</i>	<i>[Signature]</i>
Name:	Mr. V. GOPALAKRISHNAN	Prof. T. MANICKAM
	Faculty	HOD

Head of ECE Department  
**SASURIE**  
 College of Engineering  
 Vijayamangalam Tiruppur-638 056

*me*

Dr. M. VIJAYAKUMAR M.E., Ph.D.,  
 PRINCIPAL  
 SASURIE COLLEGE OF ENGINEERING,  
 Vijayamangalam - 638 056, Tiruppur (Dt).





TEST PLAN FOR SUBJECT

Subject : Latent Devices and Circuits

Faculty: Mr. V. Gopala  
krishnan

Semester : III

Year: II

Department : ECE

S. No.	Description	Planned Date/Month	Actual Conducted Date / Month	Remarks
1.	Internal Test - I	17.10.22	17.10.22	-
2.	Internal Test - II	19.12.22	19.12.22	-

	Prepared By	Approved By
Sign:	<u>V. Gopala</u>	<u>[Signature]</u>
Name:	<u>Mr. V. Gopala Krishnan</u>	<u>Prof. T. Manikam</u>
	Faculty	HOD

Head of ECE Department  
**SASURIE**  
College of Engineering  
Vijayamangalam, Tirupur-638 054

Dr. M. Vijayakumar M.E., Ph.D.,  
PRINCIPAL

SASURIE COLLEGE OF ENGINEERING,  
Vijayamangalam - 638 056, Tirupur (Dt).





RESULT ANALYSIS OF TEST

Subject : Electronic Devices & Circuits Date : 17.10.22  
Class : II Department : ECE  
Semester : III  
Exam details & date : Internal Test - 1 & 17.10.22  
Faculty : Mr. V. Gopalakrishnan  
Number of students : 03  
No. of students attended : 03  
No. of students absent : -  
No. of students passed : 03  
No. of students failed : -  
Percentage of failures : -

RESULT DATA:

Marks	0-25	26-50	51-75	76-90	91-100
No. of Students	-	-	03	-	-

	Prepared By	Approved By
	<u>V. Gopalakrishnan</u>	<u>[Signature]</u>
	<u>Mr. V. Gopalakrishnan</u>	<u>Prof. T. Manickam</u>
	Faculty	





### RESULT ANALYSIS OF TEST

Subject : Electronic Devices & Circuits Date : 19.12.22  
Class : II Department : EEE  
Semester : III  
Exam details & date : Internal Exam - II & 19.12.22  
Faculty : Mr. V. Gopalakrishnan  
Number of students : 03  
No. of students attended : 03  
No. of students absent : -  
No. of students passed : 03  
No. of students failed : -  
Percentage of failures : -

#### RESULT DATA:

Marks	0-25	26-50	51-75	76-90	91-100
No. of Students	-	-	03	-	-

Prepared By	Approved By
<u>V. Gopalakrishnan</u>	<u>[Signature]</u>
Name	Prof. T. MANICKAM
Faculty	HOOD
<u>Dr. M. VIJAYAKUMAR</u> ME., Ph.D. PRINCIPAL	Head of ECE Department







CORRECTIVE ACTION PLAN REPORT

Dept: ECE

Year: II

Subject: Electronic Devices and Circuits

Semester: III

S.No	Internal Test	Percentage of Marks	Root Cause (Metries)	Corrective Action	Deadline Date	Remarks
1	Internal Test - I	100%	-	-	-	-
2	Internal Test - II	100%	-	-	-	-

	Prepared By	Approved By
Sign:		
Name:	Mr. V. GOPALAKRISHNAN	Prof. T. MANICKAM
	Faculty	HOD

Head of ECE Department  
SASURIE  
College of Engineering  
Vijayamangalam, Tiruppur-638 056

Dr. M. VIJAYARAJ, M.E., Ph.D.,  
PRINCIPAL  
SASURIE COLLEGE OF ENGINEERING,  
Vijayamangalam - 638 056, Tiruppur (Dt).



QUALITY OBJECTIVE MONITORING RECORD

Department : ECE

Year : II

Semester : III

Subject : Electronic Devices and Circuits

S.No	Quality Objective	Internal Test-I		Internal Test-II		Model exam	
		Expecting result	Obtained result	Expecting result	Obtained result	Expecting Result	Obtained result
1.	>90%	100%	100%	90%	100%	-	-

	Prepared By	Approved By
Sign:	<i>V. Gopinath</i>	<i>[Signature]</i>
Name:	Mr. V. GOPALAKRISHNAN	Prof. T. MANI DEVI
	Faculty	HOD









Internal Assessment Test / Answer Book

Name	S. Sabari Jothi			Year/ Semester/Section	II & IV
Register Number	732421106003	Date/Session	17.10.22 & PN	Department	ECE
Course code	EC3353	Course Title	Electronic devices and circuits		
Internal Assessment Test	IAT 1 <input checked="" type="checkbox"/>	IAT 2 <input type="checkbox"/>	IAT 3 <input type="checkbox"/>	Model	<input type="checkbox"/>
Name and Signature of the Invigilator with date	17/10/22 S. Babyrani.				

Instruction to the Student: Put tick mark to the question attended in the column against question.

Part A			Part B/ Part C				Total Marks
Q. No.	✓	Marks	Q. NO.	✓	a	b	
					Marks	Marks	
1	✓	1	11	✓	11		11
2	✓	2	12	✓	10		10
3	✓	14	13				
4	✓	2	14				
5	✓	2	15				
6	✓	1	16				
7	✓	2	Grand Total			21	
8	✓	2	38			V. Gopalakrishnan Name and Signature of the Examiner with date	
9	✓	14					
10	✓	2					
Total		17	Grand Total				

To be filled by the examiner							
Course Outcomes	1	2	3	4	5	6	Total
Marks allotted	25	25	-	-	-	-	50
Marks Obtained	19h	18h	-	-	-	-	38.
IQAC Audit - Remarks							
Marks Verified							19/10/2022 (T. MARIKAM) Name and Signature of the IQAC member





**SASURIE**  
College of Engineering  
Vijayamangalam, Tiruppur.

**DEPARTMENT OF Electronics and Communication Engineering**

**Assignment Question Paper**

Assignment - 02		Date of Issue:	05.09.2022	Marks	10
Course code	EC3353	Course Title	Electronic Devices and Circuits		
Year	II	Semester	III	Date of Submission:	15.09.2022

Q.No	Questions	CO
1	Wien - Bridge Oscillator.	CO2
2	Derivation for Frequency of Oscillator.	CO2

Name and Signature of the Faculty Incharge

V. Gopalakrishnan.

*V. Gopalakrishnan*  
05/09/22

HoD/ECE

(T. MANICKAM)

*T. Manickam*  
5/9/2022

**Dr.M.VIJAYAKUMAR** ME., Ph.D.,  
PRINCIPAL  
SASURIE COLLEGE OF ENGINEERING,  
Vijayamangalam - 638 056, Tirupur (Dt).







**SASURIE**  
College of Engineering  
Vijayamangalam, Tiruppur.

**DEPARTMENT OF Electronics and Communication Engineering**

**Assignment Answer Sheet**

Name of the Student: *P. Rakesh*

AU Register Number: *732421106002*

Assignment - 02			Date of Issue:	05.09.2022	Marks	10
Course code	EC3353	Course Title	Electronic Devices and Circuits			
Year	II	Semester	III	Date of Submission:	15.09.2022	

Q.No	Questions	CO
1	Wien - Bridge Oscillator.	CO2
2	Derivation for Frequency of Oscillator.	CO2

**Mark Allocation**

Rubrics	Marks Allocated	Marks obtained
Content Quality	6	6
Presentation Quality	2	2
Timely submission	2	2
Total marks	10	10

Name and Signature of the Faculty In charge

*V. Gopalakrishnan*

HOD ECE

*Dr. M. VIJAYAKUMAR ME., Ph.D.,*  
PRINCIPAL

SASURIE COLLEGE OF ENGINEERING,  
Vijayamangalam - 638 056, Tirupur (Dt).