



CHRIST
COLLEGE (AUTONOMOUS)
IRINJALAKUDA, KERALA

(Regn. No. 137/75; No.F.22-1/2015/AC.U.G.C.)
Affiliated to University of Calicut and Re-accredited by NAAC 'A++' Grade
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Department:PHYSICS Batch:MSC PHY 2023 Semester:S4

Subject Planner Report (Proposed) Of CC19PPHY1C04 Electronics

Sl.no	Topic Name	Description	Date	Hour	Module	Mode of Instruction	Teaching Pedagogy
1	Problems- revision	Problems- revision	27-10-2023	4	5	Lecture	Participative Learning
2	Internal architecture of Intel 8085, register organization	Internal architecture of Intel 8085, register organization	26-10-2023	4	5	Lecture	Participative Learning
3	Introduction to 8 bit microprocessor;	Introduction to 8 bit microprocessor;	23-10-2023	1	5	Lecture	Participative Learning
4	Basic idea of static and dynamic RAM, basics of charge coupled devices.	Basic idea of static and dynamic RAM, basics of charge coupled devices.	20-10-2023	4	5	Lecture	Participative Learning
5	R-2R ladder D/A converter,	R-2R ladder D/A converter,	20-10-2023	5	5	Lecture	Participative Learning
6	State diagram, cascade counters, Shift counters	State diagram, cascade counters, Shift counters	19-10-2023	4	5	Lecture	Participative Learning
7	Different mode counters- contd	Different mode counters- contd	16-10-2023	1	5	Lecture	Participative Learning
8	Synchronous counters	Synchronous counters	13-10-2023	4	5	Lecture	Participative Learning
9	Different mode counters	Different mode counters	13-10-2023	5	5	Lecture	Participative Learning
10	Asynchronous counters-contd.	Asynchronous counters-contd.	12-10-2023	4	5	Lecture	Participative Learning
11	Asynchronous counters	Asynchronous counters	09-10-2023	1	5	Lecture	Participative Learning

12	Shift registers using D and JK flip flops and their operations,	Shift registers using D and JK flip flops and their operations,	06-10-2023	4	5	Lecture	Participative Learning
13	Shift registers as counters, ring counter,	Shift registers as counters, ring counter,	06-10-2023	5	5	Lecture	Participative Learning
14	JK and MSJK and D flip-flops,	JK and MSJK and D flip-flops,	05-10-2023	4	5	Lecture	Participative Learning
15	Minimization of Boolean functions using Karnaugh map and representation using logic gates,	Minimization of Boolean functions using Karnaugh map and representation using logic gates,	02-10-2023	1	5	Lecture	Participative Learning
16	Short circuit current, fill factor and efficiency	Short circuit current, fill factor and efficiency	29-09-2023	4	2	Lecture	Participative Learning
17	Problems	Problems	29-09-2023	5	2	Lecture	Participative Learning
18	p-n junction solar cells –Introduction	p-n junction solar cells – Introduction	28-09-2023	4	2	Lecture	Participative Learning
19	Photodiodes	Photodiodes	25-09-2023	1	2	Lecture	Participative Learning
20	Population inversion, carrier and optical confinement, optical cavity and feedback, threshold current density.	Population inversion, carrier and optical confinement, optical cavity and feedback, threshold current density.	22-09-2023	4	2	Lecture	Participative Learning
21	Photodetectors – Photoconductor (Light dependent resistor- LDR)	Photodetectors – Photoconductor (Light dependent resistor- LDR)	22-09-2023	5	2	Lecture	Participative Learning
22	Semiconductor lasers, construction and operation,	Semiconductor lasers, construction and operation,	21-09-2023	4	2	Lecture	Participative Learning

23	Light emitting diodes (LED – visible and IR,	Light emitting diodes (LED – visible and IR,	18-09-2023	1	2	Lecture	Participative Learning
24	Photonics Devices-introduction-radiative transitions and optical absorption,	Photonics Devices - introduction-radiative transitions and optical absorption,	15-09-2023	4	2	Lecture	Participative Learning
25	Light emitting diodes (LED)	Light emitting diodes (LED)	15-09-2023	5	2	Lecture	Participative Learning
26	Tunnel diode, construction and characteristics, negative differential resistance and device operation	Tunnel diode, construction and characteristics, negative differential resistance and device operation	14-09-2023	4	2	Lecture	Participative Learning
27	Problems	Problems	11-09-2023	1	4	Lecture	Participative Learning
28	OPAMP monostable multivibrators,	OPAMP monostable multivibrators	08-09-2023	4	4	Lecture	Participative Learning
29	Schmidt triggers	Schmidt triggers	08-09-2023	5	4	Lecture	Participative Learning
30	OPAMP astable multivibrators,	OPAMP astable multivibrators	07-09-2023	4	4	Lecture	Participative Learning
31	Wien bridge oscillator,	Wien bridge oscillator,	04-09-2023	1	4	Lecture	Participative Learning
32	Band pass Butterworth filters, band pass filter with multiple feedback,	Band pass Butterworth filters, band pass filter with multiple feedback,	01-09-2023	4	4	Lecture	Participative Learning
33	OPAMP notch filter,	OPAMP notch filter,	01-09-2023	5	4	Lecture	Participative Learning
34	Active high pass filters.	Active high pass filters.	31-08-2023	4	4	Lecture	Participative Learning

35	Active low pass filters	Active low pass filters	28-08-2023	1	4	Lecture	Participative Learning
36	OPAMP Practical integrator	OPAMP Practical integrator	25-08-2023	4	4	Lecture	Participative Learning
37	Practical differentiator,	Practical differentiator,	25-08-2023	5	4	Lecture	Participative Learning
38	OPAMP as inverter, scale changer, summer, V to I converter,	OPAMP as inverter, scale changer, summer, V to I converter,	24-08-2023	4	4	Lecture	Participative Learning
39	Closed loop inverting, non-inverting, and difference OPAMP configurations and their characteristics	Closed loop inverting, non-inverting, and difference OPAMP configurations and their characteristics	21-08-2023	1	4	Lecture	Participative Learning
40	Practical pole zero and lead compensation	Practical pole zero and lead compensation	18-08-2023	4	3	Lecture	Participative Learning
41	Closed loop inverting, non-inverting, and difference OPAMP configurations and their characteristics	Closed loop inverting, non-inverting, and difference OPAMP configurations and their characteristics	18-08-2023	5	4	Lecture	Participative Learning
42	Need for compensation, dominant pole compensation,	Need for compensation, dominant pole compensation,	17-08-2023	4	3	Lecture	Participative Learning
43	Frequency response, poles and zeros , transfer functions, expression for phase angle.	Frequency response, poles and zeros , transfer functions, expression for phase angle.	14-08-2023	1	3	Lecture	Participative Learning
44	Input and output impedances,	Input and output impedances,	11-08-2023	4	3	Lecture	Participative Learning

45	slew rate and UGB.	slew rate and UGB.	11-08-2023	5	3	Lecture	Participative Learning
46	Error currents and error voltages,	Error currents and error voltages,	10-08-2023	4	3	Lecture	Participative Learning
47	Open loop gain, CMRR,	Open loop gain, CMRR,	07-08-2023	1	3	Lecture	Participative Learning
48	Analysis of Emitter coupled differential amplifiers,	Analysis of Emitter coupled differential amplifiers,	04-08-2023	4	3	Lecture	Participative Learning
49	OPAMP parameters	OPAMP parameters	04-08-2023	5	3	Lecture	Participative Learning
50	Analysis of Emitter coupled differential amplifiers,	Analysis of Emitter coupled differential amplifiers,	03-08-2023	4	3	Lecture	Participative Learning
51	Differential amplifiers,	Differential amplifiers,	31-07-2023	1	3	Lecture	Participative Learning
52	Common Source and Common Drain amplifiers at high frequencies.	Common Source and Common Drain amplifiers at high frequencies.	28-07-2023	4	1	Lecture	Participative Learning
53	Problems	Problems	28-07-2023	5	1	Lecture	Participative Learning
54	Digital MOSFET gates (NOT, NAND, NOR)	Digital MOSFET gates (NOT, NAND, NOR)	27-07-2023	4	1	Lecture	Participative Learning
55	MOSFET as a switch, CMOS	MOSFET as a switch, CMOS	24-07-2023	1	1	Lecture	Participative Learning
56	Analysis of Common Source amplifiers at low frequencies	Analysis of Common Source amplifiers at low frequencies	21-07-2023	4	1	Lecture	Participative Learning
57	Analysis of Common Drain amplifiers at low frequencies	Analysis of Common Drain amplifiers at low frequencies	21-07-2023	5	1	Lecture	Participative Learning
58	Small signal model of FETs	Small signal model of FETs	20-07-2023	4	1	Lecture	Participative Learning

59	Biasing of FETs, FETs as VVR and its applications	Biasing of FETs, FETs as VVR and its applications	17-07-2023	1	1	Lecture	Participative Learning
60	construction of depletion and enhancement MOSFETs	constructi on of depletion and enhancem ent MOSFET s	14-07-2023	4	1	Lecture	Participative Learning
61	V-I characteristics and device operation	V-I characteristics and device operation	14-07-2023	5	1	Lecture	Participative Learning
62	V-I characteristics of JFETs and device operation	V-I characteristics of JFETs and device operation	13-07-2023	4	1	Lecture	Participative Learning
Signature of Faculty Signature of HOD Signature of Principal							



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Department:PHYSICS Batch:MSC PHY 2023 Semester:S4

Handling faculty:- Xavier Joseph

Subject Planner Report (Actual) Of CC19PPHY1C04 Electronics

Sl.No	Topic Name	Date	Hour	Module	Teaching Pedagogy	Portion Status	Subject Strength	Students Attended
1	Problems-revision	27-10-23	4	5	Participative Learning	Fully covered	14	14
2	Internal architecture of Intel 8085, register organization	26-10-23	4	5	Participative Learning	Fully covered	14	14
3	Introduction to 8 bit microprocessor;	23-10-23	1	5	Participative Learning	Fully covered	14	14
4	Basic idea of static and dynamic RAM, basics of charge coupled devices.	20-10-23	4	5	Participative Learning	Fully covered	14	12
5	Basic idea of static and dynamic RAM, basics of charge coupled devices.	20-10-23	4	5	Participative Learning	Fully covered	14	12
6	Basic idea of static and dynamic RAM, basics of charge coupled devices.	20-10-23	4	5	Participative Learning	Fully covered	14	12
7	R-2R ladder D/A converter,	20-10-23	5	5	Participative Learning	Fully covered	14	12
8	State diagram, cascade counters, Shift counters	19-10-23	4	5	Participative Learning	Fully covered	14	13
9	Different mode counters- contd	16-10-23	1	5	Participative Learning	Fully covered	14	12
10	Synchronous counters	13-10-23	4	5	Participative Learning	Fully covered	14	14
11	Different mode counters	13-10-23	5	5	Participative Learning	Fully covered	14	14
12	Asynchronous counters-contd.	12-10-23	4	5	Participative Learning	Fully covered	14	0
13	Asynchronous counters	09-10-23	1	5	Participative Learning	Fully covered	14	13
14	Asynchronous counters	09-10-23	1	5	Participative Learning	Fully covered	14	13
15	Shift registers using D and JK	06-10-23	4	5	Participative Learning	Fully covered	14	13

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Sl.No	Topic Name	Date	Hour	Module	Teaching Pedagogy	Portion Status	Subject Strength	Students Attended
	flip flops and their operations,							
16	Shift registers as counters, ring counter,	06-10-23	5	5		Fully covered	14	13
17	Shift registers as counters, ring counter,	06-10-23	5	5		Fully covered	14	13
18	Shift registers as counters, ring counter,	06-10-23	5	5		Fully covered	14	13
19	JK and MSJK and D flip-flops,	05-10-23	4	5		Fully covered	14	14
20	JK and MSJK and D flip-flops,	05-10-23	4	5		Fully covered	14	14
21	Minimization of Boolean functions using Karnaugh map and representation using logic gates,	02-10-23	1	5		Fully covered	14	14
22	Short circuit current, fill factor and efficiency	29-09-23	4	2		Fully covered	14	14
23	Problems	29-09-23	5	2		Fully covered	14	14
24	Problems	29-09-23	5	2		Fully covered	14	14
25	p-n junction solar cells – Introduction	28-09-23	4	2		Fully covered	14	14
26	Active low pass filters	25-09-23	1	4		Fully covered	14	13
27	Photodiodes	25-09-23	1	2		Fully covered	14	13
28	Population inversion, carrier and optical confinement, optical cavity and feedback,	22-09-23	4	2		Fully covered	14	0



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Sl.No	Topic Name	Date	Hour	Module	Teaching Pedagogy	Portion Status	Subject Strength	Students Attended
	threshold current density.				Participative Learning			
29	Photodetectors – Photoconductor (Light dependent resistor- LDR)	22-09-23	5	2	Participative Learning	Fully covered	14	14
30	Internal Exam	21-09-23	2	2	Participative Learning	Fully covered	14	13
31	Practical differentiator,	18-09-23	1	4	Participative Learning	Fully covered	14	12
32	Light emitting diodes (LED – visible and IR,	18-09-23	1	2	Participative Learning	Fully covered	14	12
33	OPAMP as inverter, scale changer, summer, V to I converter,	15-09-23	4	4	Participative Learning	Fully covered	14	14
34	Photonics Devices-introduction-radiative transitions and optical absorption,	15-09-23	4	2	Participative Learning	Fully covered	14	14
35	Photonics Devices-introduction-radiative transitions and optical absorption,	15-09-23	4	2	Participative Learning	Fully covered	14	14
36	Light emitting diodes (LED)	15-09-23	5	2	Participative Learning	Fully covered	14	15
37	Tunnel diode, construction and characteristics, negative differential resistance and device operation	14-09-23	4	2	Participative Learning	Fully covered	14	0
38	Practical pole zero and lead compensation	12-09-23	1	3	Participative Learning	Fully covered	14	14



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Sl.No	Topic Name	Date	Hour	Module	Teaching Pedagogy	Portion Status	Subject Strength	Students Attended
39	Problems	11-09-23	1	4	Participative Learning	Fully covered	14	11
40	OPAMP monostable multivibrators,	08-09-23	4	4	Participative Learning	Fully covered	14	14
41	Schmidt triggers	08-09-23	5	4	Participative Learning	Fully covered	14	14
42	Schmidt triggers	08-09-23	5	4	Participative Learning	Not covered	14	14
43	OPAMP astable multivibrators,	07-09-23	4	4	Participative Learning	Fully covered	14	14
44	Need for compensation, dominant pole compensation,	04-09-23	1	3	Participative Learning	Fully covered	14	12
45	Wien bridge oscillator,	04-09-23	1	4	Participative Learning	Fully covered	14	12
46	Band pass Butterworth filters, band pass filter with multiple feedback,	01-09-23	4	4	Participative Learning	Fully covered	14	14
47	OPAMP notch filter,	01-09-23	5	4	Participative Learning	Fully covered	14	14
48	Active high pass filters.	31-08-23	4	4	Participative Learning	Fully covered	14	14
49	OPAMP Practical integrator	25-08-23	4	4	Participative Learning	Fully covered	14	14
50	Stability of an Op-Amp	21-08-23	1	4	Participative Learning	Partially covered	14	13
51	Frequency response of Op-Amp-	18-08-23	4	3	Participative Learning	Fully covered	14	13
52	Frequency response of Op-Amp- Phase angle	18-08-23	5	4	Participative Learning	Fully covered	14	13
53	Frequency response of Op-Amp	17-08-23	4	3	Participative Learning	Partially covered	14	14
54	Frequency response of Op-Amp	17-08-23	4	3	Participative Learning	Partially covered	14	14

55	Measurement of CMRR and slew rate	14-08-23	1	3	Participative Learning	Fully covered	14	14
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Sl.No	Topic Name	Date	Hour	Module	Teaching Pedagogy	Portion Status	Subject Strength	Students Attended
56	Input and output impedances,	11-08-23	4	3	Participative Learning	Fully covered	14	15
57	Measurement of Op-Amp parameters	11-08-23	5	3	Participative Learning	Fully covered	14	15
58	Error currents and error voltages,	10-08-23	4	3	Participative Learning	Fully covered	14	14
59	Open loop gain,CMRR,	07-08-23	1	3	Participative Learning	Fully covered	14	14
60	Analysis of Emitter coupled differential amplifiers,	04-08-23	4	3	Participative Learning	Fully covered	14	14
61	OPAMP parameters	04-08-23	5	3	Participative Learning	Fully covered	14	14
62	Analysis of Emitter coupled differential amplifiers,	03-08-23	4	3	Participative Learning	Fully covered	14	14
63	Differential amplifiers,	31-07-23	1	3	Participative Learning	Fully covered	14	13
64	Common Source and Common Drain amplifiers at high frequencies.	28-07-23	4	1	Participative Learning	Fully covered	14	0
65	Problems	28-07-23	5	1	Participative Learning	Fully covered	14	0
66	Digital MOSFET gates (NOT, NAND, NOR)	27-07-23	4	1	Participative Learning	Fully covered	14	12
67	MOSFET as a switch, CMOS	24-07-23	1	1	Participative Learning	Fully covered	14	13
68	Analysis of Common Source amplifiers at low frequencies	21-07-23	4	1	Participative Learning	Fully covered	14	12

69	Analysis of Common Drain amplifiers at low frequencies	21-07-23	5	1	Participative Learning	Fully covered	14	11
70	Small signal model of FETs	20-07-23	4	1	Participative Learning	Fully covered	14	13



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Sl.No	Topic Name	Date	Hour	Module	Teaching Pedagogy	Portion Status	Subject Strength	Students Attended
71	Biasing of FETs, FETs as VVR and its applications	17-07-23	1	1	Participative Learning	Fully covered	14	14
72	construction of depletion and enhancement MOSFETs	14-07-23	4	1	Participative Learning	Fully covered	14	14
73	V-I characteristics and device operation	14-07-23	5	1	Participative Learning	Fully covered	14	14
74	V-I characteristics of JFETs and device operation	13-07-23	4	1	Participative Learning	Fully covered	14	14

Signature of HOD

Signature of Principal