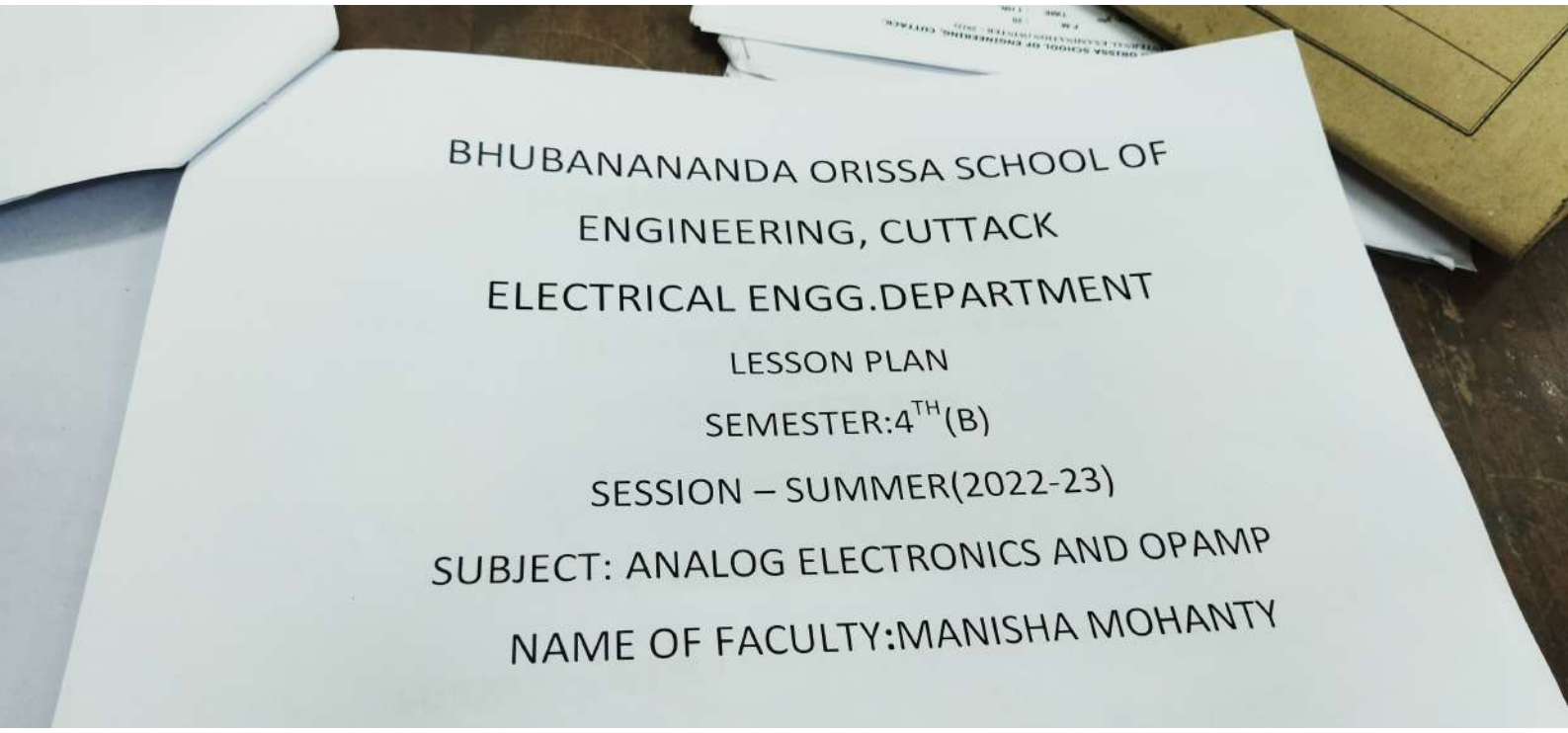
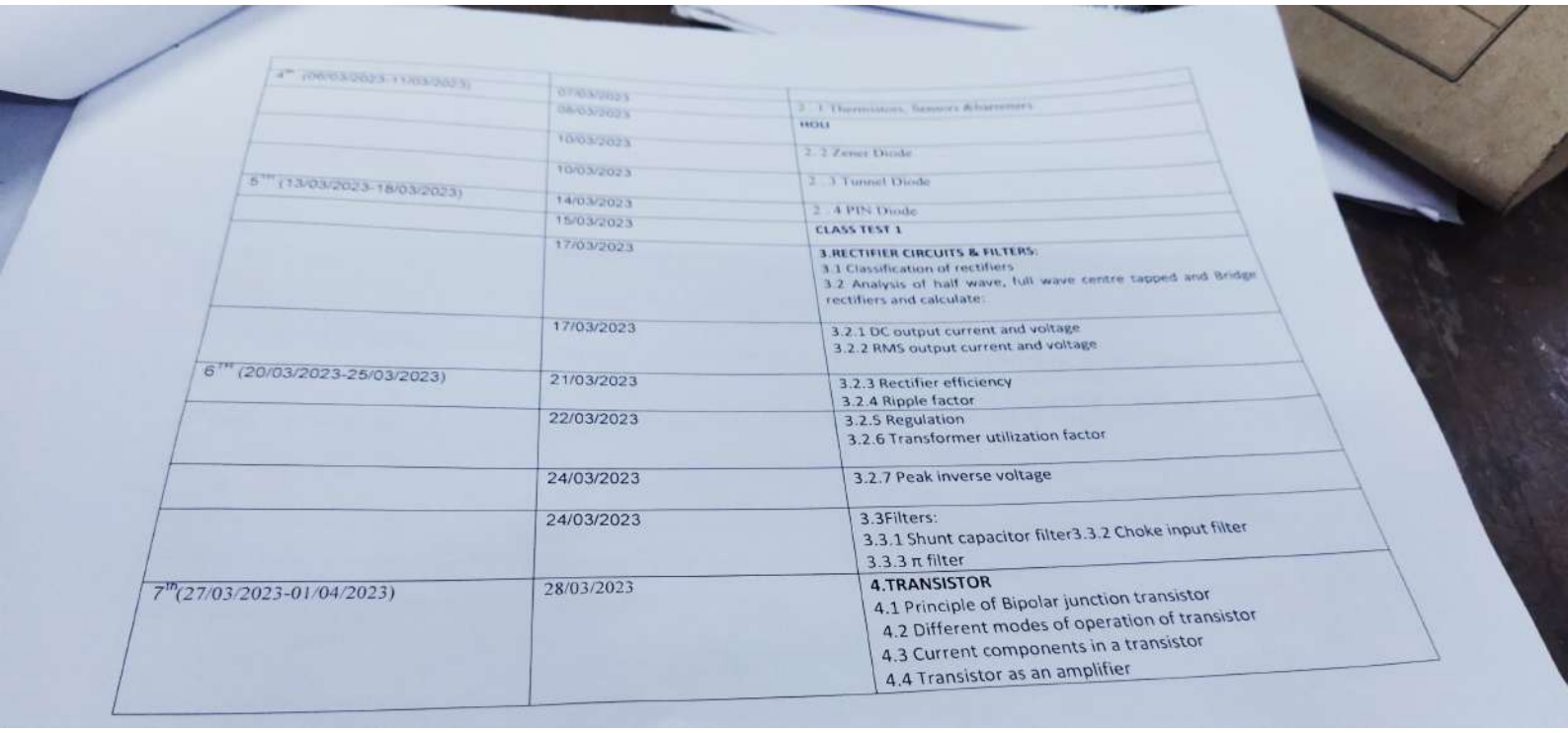
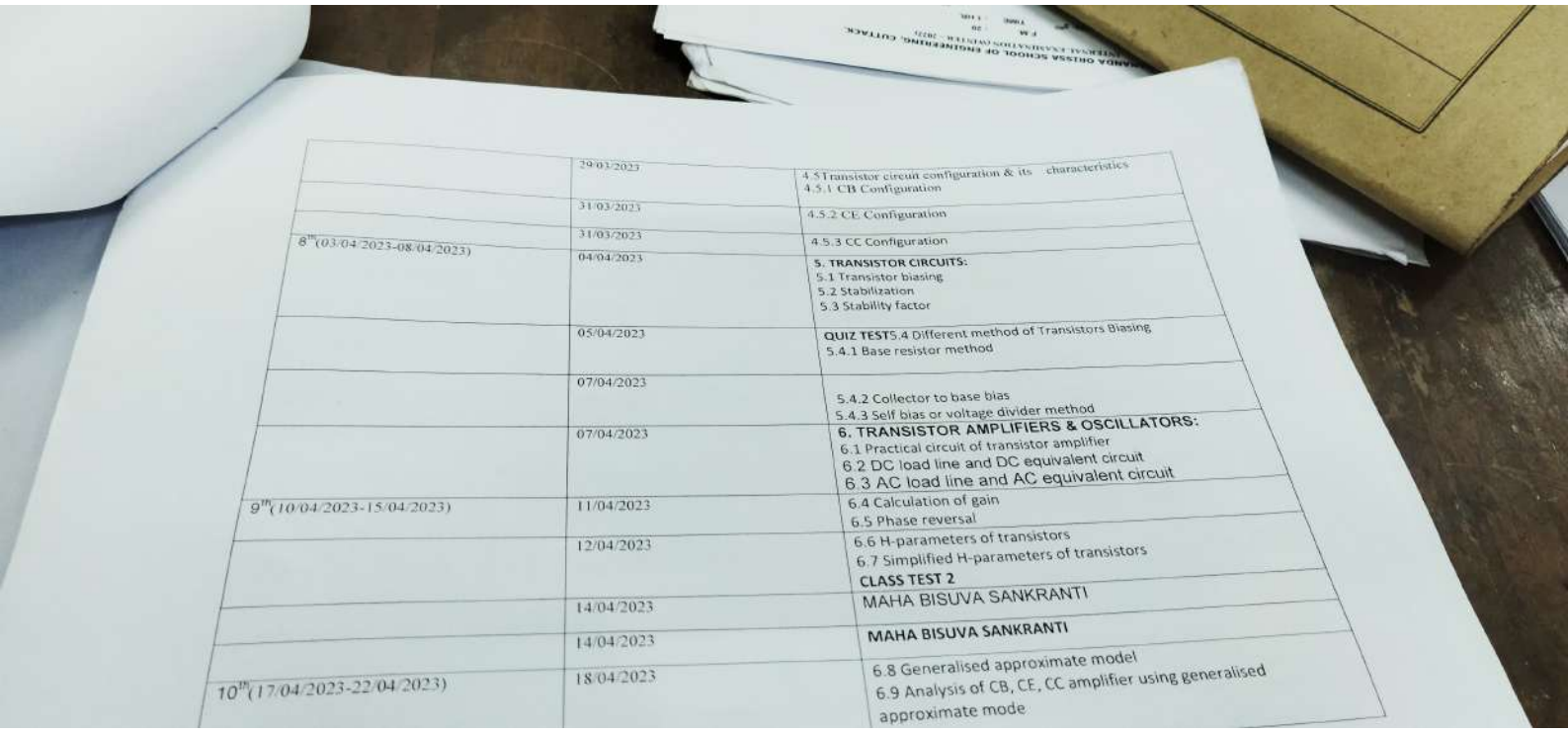

BHUBANANANDA ORISSA SCHOOL OF
ENGINEERING, CUTTACK
ELECTRICAL ENGG.DEPARTMENT
LESSON PLAN
SEMESTER:4TH(B)
SESSION – SUMMER(2022-23)
SUBJECT: ANALOG ELECTRONICS AND OPAMP
NAME OF FACULTY:MANISHA MOHANTY

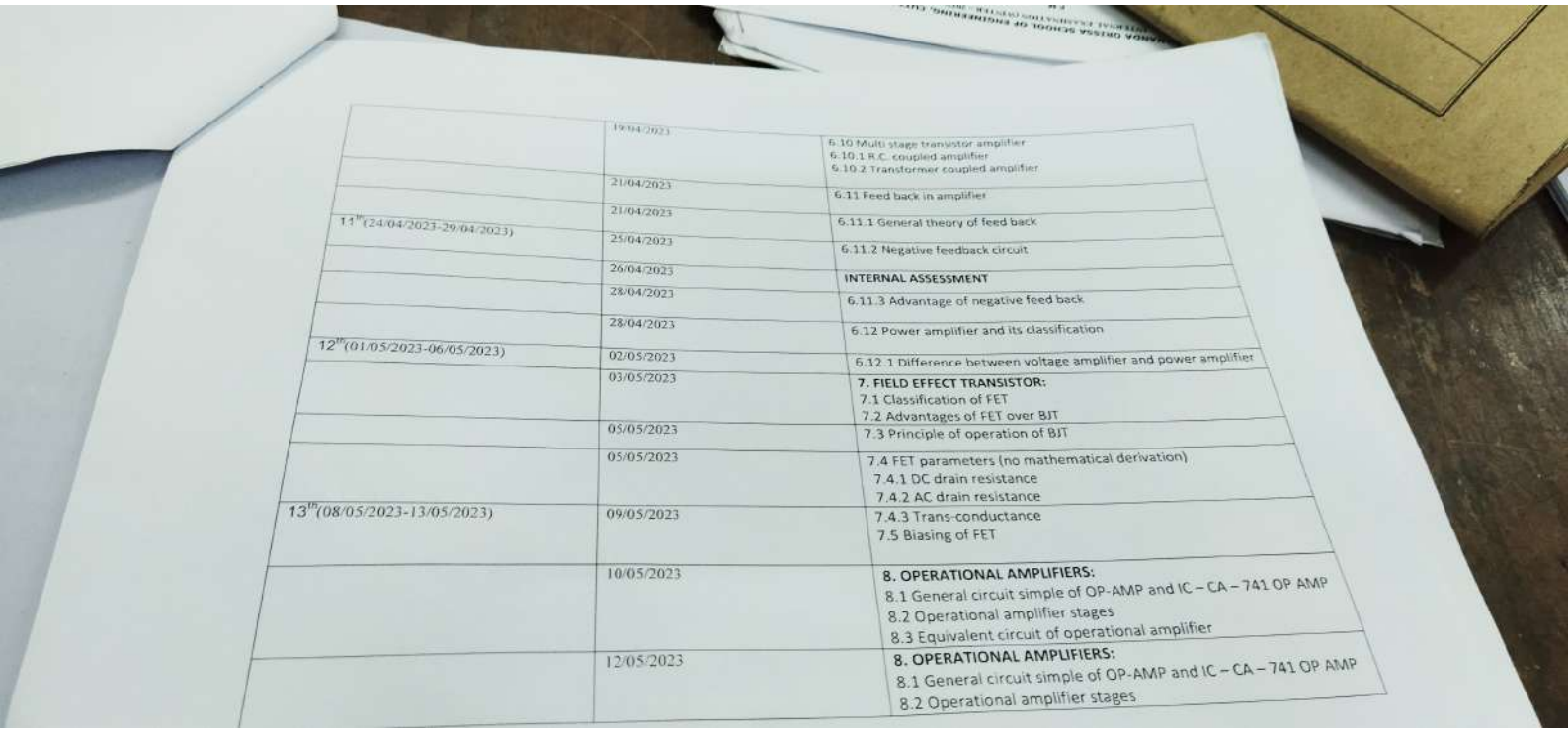
Discipline: **Electrical Engg.**	Semester: **4TH (B)**	Name of the teaching faculty: **Manisha Mohanty**
Subject: **ANALOG ELECTRONICS AND OPAMP**	No. of Days/per week class allotted: **04PERIODS /WEEK (Tue-1,Wed-1,Fri-2PERIOD)**	Semester: From Date: **14/02/2023** To Date: **23/05/2023** No. of weeks: **14 WEEKS**
Week	**Class Day**	**Theory/Practical Topics**
1st (14/02/2023-18/02/2023)	14/02/2023	**1. P-N JUNCTION DIODE:** 1 . 1 P-N Junction Diode
	15/02/2023	**1. P-N JUNCTION DIODE:** 1 . 1 P-N Junction Diode
	17/02/2023	1 . 2 Working of Diode
	17/02/2023	1 . 3 V-I characteristic of PN junction Diode.
2nd (20/02/2023-25/02/2023)	21/02/2023	1 . 4 DC load line
	22/02/2023	1 . 5 Important terms such as Ideal Diode, Knee voltage 1 . 6 Junctions break down. 1.6.1 Zener breakdown 1.6.2 Avalanche breakdown
	24/02/2023	1 . 6 Junctions break down. 1.6.1 Zener breakdown 1.6.2 Avalanche breakdown
	24/02/2023	1 . 7 P-N Diode clipping Circuit.
3rd (27/02/2023-04/03/2023)	28/02/2023	1 . 7 P-N Diode clipping Circuit.
	01/03/2023	1 . 8 P-N Diode clamping Circuit
	03/03/2023	1 . 8 P-N Diode clamping Circuit
	03/03/2023	**2.SPECIAL SEMICONDUCTOR DEVICES:**



4th (06/03/2023-11/03/2023)	07/03/2023	2 . 1 Thermistors, Sensors Absorbers
	08/03/2023	HOLI
	10/03/2023	2 . 2 Zener Diode
	10/03/2023	2 . 3 Tunnel Diode
5TH (13/03/2023-18/03/2023)	14/03/2023	2 . 4 PIN Diode
	15/03/2023	CLASS TEST 1
	17/03/2023	3.RECTIFIER CIRCUITS & FILTERS: 3.1 Classification of rectifiers 3.2 Analysis of half wave, full wave centre tapped and Bridge rectifiers and calculate:
	17/03/2023	3.2.1 DC output current and voltage 3.2.2 RMS output current and voltage
6TH (20/03/2023-25/03/2023)	21/03/2023	3.2.3 Rectifier efficiency 3.2.4 Ripple factor
	22/03/2023	3.2.5 Regulation 3.2.6 Transformer utilization factor
	24/03/2023	3.2.7 Peak inverse voltage
	24/03/2023	3.3Filters: 3.3.1 Shunt capacitor filter3.3.2 Choke input filter 3.3.3 π filter
7th(27/03/2023-01/04/2023)	28/03/2023	4.TRANSISTOR 4.1 Principle of Bipolar junction transistor 4.2 Different modes of operation of transistor 4.3 Current components in a transistor 4.4 Transistor as an amplifier



	29/03/2023	4.5 Transistor circuit configuration & its characteristics 4.5.1 CB Configuration
	31/03/2023	4.5.2 CE Configuration
	31/03/2023	4.5.3 CC Configuration
8th (03/04/2023-08/04/2023)	04/04/2023	**5. TRANSISTOR CIRCUITS:** 5.1 Transistor biasing 5.2 Stabilization 5.3 Stability factor
	05/04/2023	**QUIZ TEST**5.4 Different method of Transistors Biasing 5.4.1 Base resistor method
	07/04/2023	5.4.2 Collector to base bias 5.4.3 Self bias or voltage divider method
	07/04/2023	**6. TRANSISTOR AMPLIFIERS & OSCILLATORS:** 6.1 Practical circuit of transistor amplifier 6.2 DC load line and DC equivalent circuit 6.3 AC load line and AC equivalent circuit
9th (10/04/2023-15/04/2023)	11/04/2023	6.4 Calculation of gain 6.5 Phase reversal
	12/04/2023	6.6 H-parameters of transistors 6.7 Simplified H-parameters of transistors **CLASS TEST 2**
	14/04/2023	MAHA BISUVA SANKRANTI
	14/04/2023	**MAHA BISUVA SANKRANTI**
10th (17/04/2023-22/04/2023)	18/04/2023	6.8 Generalised approximate model 6.9 Analysis of CB, CE, CC amplifier using generalised approximate mode



	19/04/2023	6.10 Multi stage transistor amplifier 6.10.1 R.C. coupled amplifier 6.10.2 Transformer coupled amplifier
	21/04/2023	6.11 Feed back in amplifier
11TH(24/04/2023-29/04/2023)	21/04/2023	6.11.1 General theory of feed back
	25/04/2023	6.11.2 Negative feedback circuit
	26/04/2023	**INTERNAL ASSESSMENT**
	28/04/2023	6.11.3 Advantage of negative feed back
	28/04/2023	6.12 Power amplifier and its classification
12TH(01/05/2023-06/05/2023)	02/05/2023	6.12.1 Difference between voltage amplifier and power amplifier
	03/05/2023	**7. FIELD EFFECT TRANSISTOR:** 7.1 Classification of FET 7.2 Advantages of FET over BJT
	05/05/2023	7.3 Principle of operation of BJT
	05/05/2023	7.4 FET parameters (no mathematical derivation) 7.4.1 DC drain resistance 7.4.2 AC drain resistance
13TH(08/05/2023-13/05/2023)	09/05/2023	7.4.3 Trans-conductance 7.5 Biasing of FET
	10/05/2023	**8. OPERATIONAL AMPLIFIERS:** 8.1 General circuit simple of OP-AMP and IC – CA – 741 OP AMP 8.2 Operational amplifier stages 8.3 Equivalent circuit of operational amplifier
	12/05/2023	**8. OPERATIONAL AMPLIFIERS:** 8.1 General circuit simple of OP-AMP and IC – CA – 741 OP AMP 8.2 Operational amplifier stages