



SATPUDA SHIKSHAN VA GRAMIN VIKAS SANSTHA'S
Bapumiya Sirajoddin Patel Arts, Commerce and Science
College, Pimpalgaon Kale

Minority Status Institution
Affiliated to Sant Gadge Baba Amaravati University, Amaravati
Accredited with "B" Grade by NAAC

Department of Physics

Notice

Date:- 23/03/2022

This is to inform all the B.Sc. IIIrd (PCM/CSPM) students that our Department of Physics is starting a Certificate Course.

Details of the course

Course: **Basics of Electronics**

Duration: 30 hours

Fees: Nil

Certificate will be awarded on the completion of the course.

Student who are interested in joining this course, Should give their names to Mr. M. P. Jambhale

Mr. M. P. Jambhale
Certificate Course
Coordinator
Department of Physics

Dr. C. B. Palan
HOD
Department of Physics

Dr. I. A. Raja
Principal
B. S. Patel ACS College,
Pimpalgaon Kale



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Department of Physics

Name of the Course: Introduction to Basic Electronics


Schedule

Date & Time	Teacher	Topic
01/04/2022 07:00 AM to 7.36 AM	C. B. Palan	Introduction of Semiconductor
04/04/2022 07:00 AM to 7.36 AM	C. B. Palan	Charge carrier and conductivity, Ohms law
05/04/2022 07:00 AM to 7.36 AM	C. B. Palan	doping, Types of semiconductors
06/04/2022 07:00 AM to 7.36 AM	C. B. Palan	Intrinsic and Extrinsic semiconductor
07/04/2022 07:00 AM to 7.36 AM	C. B. Palan	Fermi level, Position and effect of temperature
08/04/2022 07:00 AM to 7.36 AM	C. B. Palan	drift current in semiconductor, mobility, conductivity,
09/04/2022 07:00 AM to 7.36 AM	C. B. Palan	Hall Effect and application
11/04/2022 07:00 AM to 7.36 AM	C. B. Palan	Introduction to BJT
12/04/2022 07:00 AM to 7.36 AM	C. B. Palan	Working of BJT mode operation,
13/04/2022 07:00 AM to 7.36 AM	C. B. Palan	Biasing of transistor
16/04/2022 07:00 AM to 7.36 AM	C. B. Palan	Input and output characteristics of Transistor
18/04/2022 07:00 AM to 7.36 AM	C. B. Palan	Current gain, α and β relation, For CB mode,
19/04/2022 07:00 AM to 7.36 AM	C. B. Palan	Relation of α and β for CE characteristics of Transistor
20/04/2022 07:00 AM to 7.36 AM	C. B. Palan	JFET construction and working characteristics of JFET
21/04/2022 07:00 AM to 7.36 AM	M.P. Jambhale	Basic concept of difference amplifier
22/04/2022 07:00 AM to 7.36 AM	M.P. Jambhale	IC OP-Amp, electrical Parameter of OP-AMP,
23/04/2022 07:00 AM to 7.36 AM	M.P. Jambhale	Application of OP-AMP
25/04/2022 07:00 AM to 7.36 AM	M.P. Jambhale	Inverting amp
26/04/2022	M.P. Jambhale	Non-inverting OP Amp,

07:00 AM to 7.36 AM		
26/04/2022 07:00 AM to 7.36 AM	M.P. Jambhale	Adder, Subtractor,
27/04/2022 07:00 AM to 7.36 AM	M.P. Jambhale	Integrator
28/04/2022 07:00 AM to 7.36 AM	M.P. Jambhale	Differentiator
29/04/2022 01:00 PM to 3.00 PM	M.P. Jambhale	To study Ohms law
30/04/2022 01:00 PM to 3.00 PM	M.P. Jambhale	To study V I Characteristics of PN Junction diode
02/05/2022 01:00 PM to 3.00 PM	M.P. Jambhale	To Study V I Characteristics of Zener Junction diode
04/05/2022 01:00 PM to 3.00 PM	M.P. Jambhale	To Study V I Characteristics of LED
05/05/2022 01:00 PM to 3.00 PM	M.P. Jambhale	To Study V I Characteristics of CE Amplifier.
06/05/2022 01:00 PM to 3.00 PM	Dr. C. B. Palan	To study Op-Amp as Inverting Amplifier, Non-Amplifier
07/05/2022 01:00 PM to 3.00 PM	Dr. C. B. Palan	To study Op-Amp as Integrator and Differentiator
08/05/2022 01:00 PM to 3.00 PM	Dr. C. B. Palan	To study Op-Amp as Adder and Subtractor.


Convener


HOD


Principal
Principal
Bapuniya Sirojodan Patel
Arts, Com. & Sci. College,
Pimpelgaon Kale - 378.

Introduction to Basic Electronics

Syllabus

Unit 1

Semiconductor & Semiconductor Diode

Physics of semiconductor: Introduction to Semiconductor, Charge Carrier, and electrical conduction through semiconductor, doping, extrinsic semiconductor, Fermi level, energy level diagram, drift current in semiconductor, mobility, conductivity, Hall Effect. (7)

Unit 2

BJT (Bipolar Junction Transistor)

Introduction to BJT, working of BJT mode operation, current gain, α and β relation, CB and CE characteristics of Transistor, JFET construction and working characteristics of JFET (7)

Unit 3

OP-AMP and Application


Basic concept of difference amplifier, IC OP-Amp, electrical Parameter of OP-AMP, Inverting amp and Non-inverting OP Amp, Adder, Subtractor, Integrator and differentiator (7)

Practical List (14L)

- ✓ To study Ohms law
- ✓ To study V I Characteristics of PN Junction diode
- ✓ To Study V I Characteristics of Zener Junction diode
- ✓ To Study V I Characteristics of LED
- ✓ To Study V I Characteristics of CE Amplifier.
- ✓ To study Op-Amp as Integrator and Differentiator
- ✓ To study Op-Amp as Adder and Subtractor.


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