

Electronics

Paper-VII

M.Sc Physics (Final)

(Online Teaching Content)

(Remaining Course Work Content for the Session - 2019-20)

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Note: All MSc. (Prev./Final) students are instructed to make a Gmail account and send an email to my above email address so that Google Class Room Invitation may be sent. Also send your Mobile number in the Email.

Dear Students

As we all know that due to the Covid-19 viral pandemic the world is at halt so as our country. This locked down situation may persists for some time due to wide spread of the virus. The HEC and UoP has announced to offer the online Teaching Courses (A synchronous Mode – The Teaching Material will be provided for download And Videos of Teaching Material with Audio Lectures will be posted) to complete the remaining courses.

The switching process from Class Room Teaching to The online Teaching environment is a big uphill task which needs the conversion of all class room Teaching Material to the Computer Slides PDF MS Office files which requires a lot of time. Due to the short time I am going put the Class Room Teaching Course material on handwritten PDF files and Power point slides and will be posted on our website for the students. We are also in the process of preparing the videos of the posted Teaching Material with Audio Lectures . Since video recording is a time taking process the completed video lectures will be uploaded on the various Web Drives in my case it will be Google Drive and Youtube.

Note: The codes below assigned to topics are not official. I have assigned these codes for the Classification of my online Teaching Material. The Abbreviations carry the information of Main Titles of the Syllabus Sections below are the abbreviations:

ELEC-OSC-S#: Electronics -**O**scillator -**S**ection#

ELEC-OPAMP-S#: Electronics – **O**perational Amplifier- **S**ection#

ELEC-SPD-S#: Electronics – **S**pecial **D**evelopments- **S**ection#

ELEC- DIGE-S#: Electronics – **D**igital -**E**lectronics- **S**ection#

ELEC-PR- S# Electronics **P**roblems -**S**#

(Problems related to respective Topics)

Online Teaching Material Code	Title of the Topic
ELEC-OSC-S1	Oscillator, its basic working mechanism and circuitries
ELEC-OSC-S2	Hartley and Colpitts Oscillators
ELEC-OSC -S3	RC-Phase Shift and crystal Oscillators
ELEC-OPAMP-S1	Operational Amplifier
ELEC-OPAMP-S2	Ideal OP-AMP, Virtual Ground and Summing Points, Unity follower
ELEC-OPAMP-S3	Linear Amplifier, Inverting and non-inverting Amplifiers
ELEC-OPAMP-S4	Adder, Subtractor
ELEC-OPAMP-S5	Integrator, Differentiator
ELEC-OPAMP-S6	Comparator, Bode Plot
ELEC-OPAMP-S7	High pass, Low pass and Band Pass filters

Online Teaching Material Code	Title of the Topic
ELEC-SPD-S1	Field Effect Transistor (FET)
ELEC-SPD-S2	Uni Junction Transistor (UJT)
ELEC-SPD-S3	Silicon Controlled Rectifier (SCR)
ELEC-SPD-S4	DIAC
ELEC-SPD-S5	TRIAC
ELEC-DIGE-S1	Introduction to Digital Electronics, Number Systems, Decimal No. System, Octal No. System, Hexadecimal No. System
ELEC-DIGE-S2	Binary Number System, Addition, Subtraction, Multiplication, Division
ELEC-DIGE-S3	Boolean Algebra, Laws and theorems of Boolean Algebra
ELEC-DIGE-S4	DE Morgan's Theorems
ELEC-DIGE-S5	Logic Gates, OR, AND, NOT, NOR, NAND, EXOR, EXNOR Gates
ELEC-DIGE-S6	Interconnecting Gates, Universal NAND and NOR Gates
ELEC-DIGE-S7	Half Adder, Full Adder
ELEC-DIGE-S8	Binary Adder, Binary Subtractor
ELEC-DIGE-S9	K -MAP, Counters, Registers

The End