P.R. Government College (A), Kakinada

Department of Physics and Electronics

Program: B.Sc.

Electronics Course Objectives

S. No.	Semester	PAPER	Course	Course Objectives
1	I	PAPER – 1	Basic Circuit Theory	1. Become adept at using various methods of circuit analysis, including simplified methods such as series-parallel reductions, voltage and current dividers, and the node method. 2. Appreciate the consequences of linearity, in particular the principle of superposition and Thevenin-Norton equivalent circuits.
2	II	PAPER – 2	Electronic Devices and Circuits	1. To Study construction, working, V-I characteristics of PN Junction Diode & Zener Diode. 2. Observe Fixed bias and self bias arrangement 3. Demonstrate Solar Cell and LED 4. Determination of h-parameters from the characteristics of BJT
3	III	PAPER – 3	DIGITAL ELECTRONICS	1. Recognize Universal building blocks 2. Observe Flip flops-RS,D flip flops-JK and JK master-slave 3. Demonstrate Logic families
4	IV	PAPER – 4	OP – AMP & Digital IC-applications	1. To study the construction of Operational Amplifier 2. To study various applications of Operational amplifier such as Summing amplifier, Integrator, Differentiator, Schmitt trigger and Active filter. 3. To study the construction and applications of 555 timer.
5	V	PAPER - 5	MICROPROCESSORS (INTEL 8085)	1. Study architecture of 8085. 2. Recognize PIN configuration of 8085 and its description 3. Observe classification of instructions 4. Illustrate Interfacing of I/O devices 5. Demonstrate Programmable peripheral device (8255)
6	V	PAPER - 6	ELECTRONIC COMMUNICATION SYSTEMS	1. The student can gain good knowledge on analog and digital communication. 2. Understand basic elements of a communication system. 3. Conduct analysis of baseband signals in time domain and in frequency domain. 4. Demonstrate understanding of various analog and digital modulation and

				demodulation techniques techniques. 5. Analyse the performance of modulation and demodulation techniques in various transmission environments
7	VI	PAPER VII - A	MICRO CONTROLLER AND INTERFACING	1. The student can gain good knowledge on microcontrollers and implement in practical applications 2. Learn Interfacing of Microcontroller 3. Get familiar with real time operating system
8	VI	PAPER VII - B	PC MAINTAINANCE AND TROUBLE SHOOTING	1. The student can gain good knowledge on various electronic appliances. 2. Learn Interfacing of Various components of computer. 3. Learn about Software installation. 4. Learn about Hardware identification.
9	VI	PAPER VIII(A)-1	POWER ELECTRONICS	1. Explain the characteristics of various power semiconductor devices and analyze the static and dynamic characteristics of SCR's. 2. Design firing circuits for SCR. 3. Explain the operation of rectifiers with different loads. 4. Analyze the operation of different types choppers.
10	VI	PAPER VIII(A)-2	CONSUMER ELECTRONICS	1. The student can gain good knowledge on various electronic appliances. 2. Learn Interfacing of Various components of electronic appliances. 3. Get familiar with real time operating system. 4. Learn about power ratings of electronic appliances 5. Learn about different types of digital access devices.
11	VI	PAPER VIII(A)-3	EMBEDDED SYSTEMS DESIGN	1. The student can gain good knowledge on Embedded Systems and implement in practical applications. 2. To study advanced communication principles.
12	VI	PAPER VIII(B)-1	COMPUTER NETWORKS	1. The student can gain good knowledge on various Network models. 2. Learn about Interfacing of Various Layers. 3. Get familiar with different types of Layers.
13	VI	PAPER VIII(B)-2	ELECTRONIC INSTRUMENTATION	1. Measurement of R, L, C, Voltage, Current, Power factor, Power, Energy. 2. Ability to measure strain, displacement, Velocity, Angular Velocity, temperature, Pressure, Vacuum, and Flow.
14	VI	PAPER VIII(B)-3	OPTICAL FIBER COMMUNICATION AND IT'S APPLICATION	1. Understanding of the concepts and principles of optical fiber communications. 2. Line transmission systems - analog and digital transmission system standards. 3. To analyze, design, install and manage typical wired and wireless communication systems and network.