

Digital Communication 304181 SEM-I

Sr No	Code	Statement
1	C311.1	Compare the performance of the waveform coding techniques
2	C311.2	Examine the performance of a baseband and bandpass communication system in terms of error rate and spectral efficiency
3	C311.3	Compare error performance of digital communication system in presence of noise and other interferences
4	C311.4	Examine the performance of a baseband receiver in digital communication system in presence of AWGN
5	C311.5	Recognize various digital modulation techniques used in digital communication systems for their performance in presence of AWGN noise
6	C311.6	Explain working of spread spectrum communication system for its performance

Digital Signal Processing 304182 SEM-I

Sr No	Code	Statement
1	C312.1	Describe basic concepts related related to Digital Signal Processing
2	C312.2	Examine the discrete time signals using Fourier transform techniques.
3	C312.3	Examine the discrete time signals using Z-transform techniques.
4	C312.4	Implement IIR filters for filtering different real world signals.
5	C312.5	Implement FIR filters for filtering different real world signals.
6	C312.6	Execute different signal processing applications using DSP processor

Electromagnetics 304183 SEM-I

Sr No	Code	Statement
1	C 313.1	Define basic mathematical and physics concept related to electromagnetic field.
2	C 313.2	Discuss the principle of Electrostatics and electromagnetics laws and theorem the solution of problem related to the electric field, electric potential, boundary condition.
3	C 313.3	Discuss the principle of Magnetostatics to the solution of problem related to the magnetic field, Magnetic vector potential, Magnetic energy density.
4	C 313.4	Expalin the concepts of Faraday's law, induced emf and Maxwell's equations and use Maxwell equation to solve electromagnetic numericals.
5	C 313.5	Explain the Maxwell equation to the solution of problem related to the transmission line.

6	C 313.6	Explain the Maxwell equation to the solution of problem related to the uniform plane wave propagation.
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Microcontrollers 304184 SEM-I

Sr No	Code	Statement
1	C314.1	Explain the 8051 microcontroller architecture and its feature
2	C314.2	Interface the peripherals like LED, LCD, Seven segment, ADC to 8051 microcontroller
3	C314.3	Interface the peripherals like Temperature sensor, Relay, buzzer, optoisolator to 8051 microcontroller
4	C314.4	Explain the PIC microcontroller architecture and its features
5	C314.5	Interface the peripherals like LED, LCD, keypad, DC to PIC microcontroller
6	C314.6	Interface the peripherals like ADC, I2C, UART, EEPROM, RTC to PIC microcontroller

Mechatronics 304185 SEM-I

Sr No	Code	Statement
1	C315.1	Discuss the basics of Mechatronics systems, Mechanical components and servo mechanism.
2	C315.2	Determine basic principles and characteristics of different sensors and transducers.
3	C315.3	Discuss the concepts of Hydraulic actuators.
4	C315.4	Sketch the concepts of Pneumatic actuators.
5	C315.5	Discuss the concepts of Electrical and Electromechanical actuators.
6	C315.6	Review the case study of various systems in Automobile.

Signal Processing and Communications Lab (DC/DSP) 304191 SEM-I

Sr No	Code	Statement
1	C316.1	Differentiate different digital modulation techniques and its simulation.
2	C316.2	Examine performance of spread spectrum techniques.
3	C316.3	Execute simulation for various signal processing operations such as sampling, convolution and pole zero plot using transform domain techniques.
4	C316.4	Design, implement and simulate filters and compare the frequency response

Microcontroller and Mechatronics Lab 304192 SEM-I

Sr No	Code	Statement
1	C317.1	Write assembly language program to interface the peripherals with 8051 microcontrollers
2	C317.2	Write Embedded C program to interface the peripherals with PIC microcontrollers
3	C317.3	Estimate the parameters using Different types of sensors.
4	C317.4	Examine Different type of Actuators

Electronic System Design 304193 SEM-I

Sr No	Code	Statement
1	C318.1	Use the fundamental concepts and working principles of electronics devices to design electronics systems.
2	C318.2	Interpret datasheets and thus select appropriate components and devices
3	C318.3	Select appropriate transducer and signal conditioning circuit to design prototype of Data Acquisition system.
4	C318.4	Design an electronic system/sub-system and validate its performance by simulating the same. Shall be able to use an EDA tool for circuit schematic and simulation. Create, manage the database and query handling using suitable tools.

Power Electronics 304186 SEM-II

Sr No	Code	Statement
1	C321.1	Explain characteristics and discuss triggering / gate drive circuit for a power devices.
2	C321.2	Illustrate AC-DC power converter
3	C321.3	Examine DC-AC converter with single phase and three phase
4	C321.4	Demonstrate DC-DC converters & AC Voltage controller.
5	C321.5	Discuss the different protection circuit of power devices and need of resonant converters.
6	C321.6	Examine power electronics device according to their applications.

Information Theory, Coding and Communication Networks 304187 SEM-II

Sr No	Code	Statement
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1	C322.1	Use suitable source coding technique for data compression and discuss Information theoretic behavior of communication system
2	C322.2	Use channel coding techniques like Linear Block code, Parity Check codes and discuss concept of information capacity.
3	C322.3	Use cyclic channel coding Technique for the sequence.
4	C322.4	Use RS, BCH and Convolution channel coding Technique for input.
5	C322.5	Discuss fundamental principles of Data Communication and Networking.
6	C322.6	Discuss flow and Error control technique in communication Networks.

Business management 304188 SEM-II

Sr No	Code	Statement
1	C323.1	Explain Management Science aspects useful in business.
2	C323.2	Explain the Quality Aspects for Systematically Running the Business
3	C323.3	Explain Project Management and financial management aspect
4	C323.4	Explain Human resource development
5	C323.5	Explain Entrepreneurship Skills.
6	C323.6	Explain marketing management skills

Advance Processor 304189 SEM-II

Sr No	Code	Statement
1	C324.1	Describe the ARM7 microprocessor architecture and its feature
2	C324.2	Describe the architecture and features of ARM based microcontroller (LPC 2148)
3	C324.3	Write embedded C codes to interfacesimple peripherals to ARM based microcontroller for real world applications
4	C324.4	Write embedded C codes to interface advance peripherals to ARM based microcontroller for real world applications
5	C324.5	Explain DSP Processors architecture and its features
6	C324.6	Explain the architecture, features and instruction set of TMS320C67X DSP processor

System Programming and Operating Systems 304190 SEM-II

Sr No	Code	Statement
1	C325.1	Demonstrate the knowledge of Systems Programming and Operating Systems
2	C325.2	Demonstrate linker ,loader and compiler
3	C325.3	Interpret various OS functions used in Linux / Ubuntu
4	C325.4	Discuss concurrency and deadlock in operating systems
5	C325.5	Explain Memory Management
6	C325.6	Explain I/O management & Disk scheduling

Power & ITC&CN Lab 304194 SEM-II

Sr No	Code	Statement
1	C326.1	Implement a program for determining entropy ,mutual information of given channel and Channel and Source coding techniques using Matlab software.
2	C326.2	Implement a program for ARQ Technique with knowledge of networking components using Matlab software
3	C326.3	Identify different types of power electronics devices and plot their characteristics.
4	C326.4	Compare parameters of converter with R & RL load using graphical representation.

AP & SPOS Lab 304195 SEM-II

Sr No	Code	Statement
1	C327.1	Write Embedded c program to Interfacing LPC2148 with peripherals
2	C327.2	Write Embedded c program for TMS320C6748 Digital Signal Processor
3	C327.3	Write C Program to implement Lexical Analyzer, scheduling algorithms
4	C327.4	Write C program shell scripting on LINUX OS

Employability Skills and Mini Project 304196 SEM-II

Sr No	Code	Statement
1	C328.1	Identify the real-world problem through literature survey

2	C328.2	Implement suitable solution based on the fundamentals of electronics and communication engineering and Contribute to society through proposed solution by following professional ethics and safety measures.
3	C328.3	Use technology in proposed work, analyze the results, arrive at valid conclusion and demonstrate learning in oral and written form.
4	C328.4	Develop ability to work as an individual and as a team member.