Department of Electronics

Syllabus and Course Outcome (Paper specific outcome for general papers) :

List of General Papers of Annual system for 2017-2018 for B.Sc. General courses

Level of teaching	Paper number	Paper title
Part – I	Paper IA	Electronic Circuits and Basic Electronics-I
	Paper IB	Basic Electronics-II
Part – II	Paper IIA	Digital Electronics and Instrumentation
	Paper IIB	Electronic Communication
	Paper IIIA	Electricity and Analog Electronics(Practical)
	Paper IIIB	Digital Electronics(Practical)
Part –III	Paper IVA	8085 Microprocessor and Computer Programming
	Paper IVB	8085 Assembly Language Programming and C programming

List of all general papers of CBCS system from 2018-2019 along with paper titles and course code for B.Sc. general courses

Level of teaching	Course code	Paper title
Sem – I	CC-1A/GE-1	Network Analysis and Analog Electronics
	CC-1A(Lab)	Network Analysis and Analog Electronics(Practical)
Sem – II	CC -1B/GE-2	Linear and Digital Integrated circuits
	CC-1B(Lab)	Linear and Digital Integrated circuits(Practical)

Sem - III	CC-1C/GE-3	Communication electronics
	CC-1C(Lab)	Communication electronics(Practical)
Sem-IV	CC-1D/GE-4	Microprocessors and Microcontrollers
	CC-1D(Lab)	Microprocessors and Microcontrollers(Practical)
Sem - V	DSE -1A	Semiconductor device fabrication or Photonic devices and power electronics
	DSE-1A(Lab)	Semiconductor device fabrication or Photonic devices and power electronics (Practical)
Sem-VI	DSE-1B	Electronic Instrumentation or Transmission lines,antenna and radio wave propagation
	DSE-1B (Lab)	Electronic Instrumentation or Transmission lines,antenna and radio wave propagation(Practical)

Course outcome(Paper specific outcome for general papers) :

Analog Circuits and Systems :

After completion of this students will able to
- Acquire knowledge on analog circuits.
- Acquire knowledge on circuit operation and functionality.
- Acquire knowledge on analog circuit to solve real-life problems.
- Acquire knowledge in making electronic systems.
- Know the characteristics of diodes and transistors.
- Design simple circuits and mini projects.
- know the benefits of feedback in amplifier.

- Compare and classify oscillators.

Digital Circuits and Logic Design

After completion of this students will able to
- Acquire the basic knowledge of digital logic levels and understand digital electronics circuits.
- Convert different type of codes and number systems which are used in digital communication andcomputer systems.
- Acquire knowledge on design of Digital Circuits.
- Use the basic logic gates and various reduction techniques of digital logic circuit in detail.
- Design combinational and sequential circuits.
- Design and implement hardware circuit to test performance and application.

Electromagnetic Field and Radiation

After completion of this students will able to
- Understand Maxwells"s equation in time varying field.
- Understand concepts of different coordinate systems, static electric and magnetic fields and methods of solving for the quantities associated with these fields, time varying fields and displacement current, propagation of electromagnetic waves and their applications in practical problems.
- Learn RF/microwave analysis methods and design techniques.
- Understand an overview of Passive and active devices.

Electronic Communication Systems

After completion of this students will able to
- Understand different blocks in communication system and how noise affects communication usingdifferent parameters.
- Distinguish between different amplitude modulation schemes with their advantages, disadvantages and applications.
- Analyze generation and detection of FM signal and comparison between amplitude and angle modulation schemes.
- Understand PCM, DPCM, ASK, FSK, PSK.
- Understand and identify the fundamental concepts and various components of analog communication systems.

- Explain signal to noise ratio, noise figure and noise temperature for single and cascaded stages in a communication system.
- Describe analog pulse modulation techniques and digital modulation technique.
- Develop the ability to compare and contrast the strengths and weaknesses of various communication systems.

Microprocessor Fundamentals

After completion of this students will able to
- Describe the general architecture of a microcomputer system and architecture & organization of 8085 and understand the difference between 8085 and advanced microprocessor.
- Understand and realize the Interfacing of memory & various I/O devices with 8085 microprocessor.
- Understand and classify the instruction set of 8085 microprocessor and distinguish the use of different instructions and apply it in assembly language programming.
- Understand the architecture and operation of Programmable Interface Devices and realize the programming & interfacing of it with 8085 microprocessor.
- Learn importance of Microprocessors in designing real time applications.
- Describe the 8085,8086 Microprocessors architectures and its feature.
- Develop interfacing to real world devices.

Instrumentation
After completion of this students will able to

- Acquire knowledge on electronic measurement system.
- Acquire knowledge on the methods of measuring different physical quantities.
- Acquire knowledge on measuring instruments.

Microcontroller
After completion of this students will able to

- Understand about the concepts and basic architecture of 8051.
- Write assembly language program in 8051 for various embedded system applications.
- Understand interfacing of different peripheral devices to 8051.