

Basic Electronics and Computer Application

Full Marks: 100 (Including Internal Assessment)

Credit Point: 4

Basics Electronics

Introduction, Applications, Concepts of charge, potential, voltage, current, power and their units, Active and passive components, resistor and colour codes, Capacitors and its units, Transformer.

Overview of Analog circuitry – Introduction to semiconductors, conductors, Insulators, Diode and its type, Transistor and its types- NPN & PNP , Transistor as an amplifier and switch.

Digital Electronics – Analog vs digital signals, concept of amplitude and frequency, Number system and their conversions Boolean arithmetic, De–Morgan laws, basic logic gates: their realization, Universal gates, Exclusive – Or and Exclusive NOR-gates.

Introduction to mobile communication

Cellular Communication: Concept of cellular mobile communication – cell and cell splitting, frequency bands used in cellular communication, frequency reuse, roaming and hand off, authentication of the SIM card of the subscribers, IMEI number, architecture (block diagram) of cellular mobile communication network, CDMA technology, CDMA overview, simplified block diagram of cellular phone handset, Comparative study of GSM and CDMA, 2G, 3G and 4G concepts.

Fundamentals of Computers

Introduction, Components of PC

The system Unit, Processor, Motherboard, Memory, Monitor, Keyboard, Mouse, Printer, Scanner, Disk drive, Speaker, Modem, Pendrive, CD, DVD etc.

Introduction to Windows XP/7/8

Working with Windows, Desktop, Components of Windows, Windows Explorer, Folders, Files, Start button, Use of Paint, Notepad, WordPad etc

Introduction to Internet

Internet and its use, Browser, ISP, Search Engine etc, Creating Email account, Composing and sending mails, Downloading etc