Paper – 103 (Introduction to Computers)

Course Code:	**103**
Course Title:	**Introduction to Computers**
Total Credits :	4 Credits
Nature of Subject :	Theory only
Teaching per Week:	4 Hours per week per Semester
Minimum weeks per Semester:	15 weeks (Including class work, examination, preparation etc.)
Review/Revision Year:	June, 2020
Purpose of Course :	- Concepts and types of computer and various hardware technologies relevant to computer as well as some important peripherals will be covered. - Introduction of computer internal memories, number systems and conversions from decimal to binary. - Exposure of various input and output devices as well as concepts of Internet and relevant gadgets and their applications.
Objective :	Objective is to provide knowledge of functional units, number System, Devices and memory & its storage.
Pre-requisite:	Fundamental Knowledge of Computers
Course Outcome :	After studying this subject, students will get knowledge of functional units, number System, devices and memory & its storage.
Course Content:	**<u>UNIT-1:</u> Introduction** 1.1 Introduction of Computer 1.2 Applications of Computer 1.3 Types of Computers – Super Computers, Mainframes, Mini Computers, Micro computers(Desktop, Laptop, Notebook, Tablet, Smart Phones) 1.4 Block Diagram and functional units of computer **<u>UNIT-2:</u> Basic Computer Architecture** 2.1 Concepts of Address Bus and Data Bus 2.2 Concept of virtual memory and cache memory 2.3. Hardware Components 2.3.1. Motherboard 2.3.2. Types of Processor (CPU and GPU) 2.3.3. Understanding processor speed 2.3.4. Memory – RAM(SRAM,DRAM, SDRAM), ROM, EPROM, EEPROM 2.3.5. Storage Devices – Hard Disk, CD, DVD, USB flash memory 2.4. Introduction to Software 2.4.1. Purpose and significance of Operating System 2.4.2. Concept of System Software and Application Software

	UNIT-3: Number System 3.1. Introduction of Decimal, Binary, Octal and Hexadecimal number Systems. 3.2 Conversion of Decimal to Binary and Binary to Decimal 3.3 Binary addition & subtraction 3.4 ASCII and ANSI character code **Unit – 4: Input & Output Devices** 4.1. Introduction of Input Devices 4.1.1. Pointing Devices – Mouse, Trackball, Joystick, Touch Screen, Light Pen 4.1.2. Keyboard 4.1.3. RFID concepts and application in FastTag 4.2. Introduction and purpose of Scanning Devices 4.2.1. Optical Scanner 4.2.2. Bar Code Reader 4.2.3. Web Camera 4.3. Introduction and comparisons of Output Devices 4.3.1. Monitors – LED, LCD,TFT, OLED, TouchScreen Monitor 4.3.2. Printers – Dot Matrix Printer, Laser Printer, Inkjet Printer **Unit - 5: Concepts of Internet** 5.1. Concepts of Internet and WWW 5.1.1 Types of Internet Services 5.1.2 Hardware – Modem, Router, Blue tooth, Fire-Stick 5.1.3 Internet connections using Hotspot, WiFi, cable 5.2 Introduction of Cloud 5.2.1 Concepts of cloud 5.2.2 Purpose and application of Cloud (Example of GoogleDoc) 5.2.3 Concepts of Online Data Backup 5.3 Introduction of Web Browser and relevant terminologies : 5.3.1 URL, Address bar, Domain, Links, Navigation Buttons 5.3.2 Tabbed browsing, Bookmarks, History
Reference Books:	1. How computer work: Ron White – Tech media 2. Introduction to computers: 4th Edition – Peter Norton 3. Fundamentals of Computers: V. Rajaraman 4. Computer Fundamentals: Pradeep K. Sinha & Priti Sinha (BPB) 5. Introduction to Networking RechardMcMohan Tata McGraw Hill Publication 6. HTML Black Book – Steven Holzner – Dreamtech Press 7. Computer Network Fundamentals and application – R S Rajesh Vikas Publication 8. HTML for the World Wide Web, Fifth Edition, with XHTML and CSS- Peachpit Press
Teaching Methodology:	Class Work, Discussion, Self-Study, Seminars and/or Assignments
Evaluation Method:	30% internal assessment. 70% External assessment