

Open - Elective

**CS-OE-01 Introduction to Information Technology**

	L/T	P	Total		Int	Ext	Total
Credits	3	1	4	Theory	25	50	75
				Practical	10	15	25

Note:- Total 09 Questions are to be set by the examiner. First question will be compulsory consisting of 5 short (each 2 marks) questions covering entire syllabus uniformly. In addition 8 more questions will be set unit wise comprising 2 questions from each unit of the given syllabus. A candidate is required to attempt five questions in all selecting one question from each unit including the compulsory question.

**Unit-I**

Historical evolution of computers, characteristics of computers, capabilities and limitations of computers. Types of computers: PCs, desktop, Laptop, palmtop, PDA. Definition: Hardware, Software and Firmware.  
Applications of computers: Computers and their impact on society, computer in education, commercial data processing.

**Unit-II**

Block diagram of computer identifying their components and functions.  
Primary memory: RAM, ROM, EPROM, EEPROM, DRAM, SRAM.  
Secondary Memory : Magnetic tapes, Magnetic Disk, Hard Disk, Compact Disk, USB Hard Drives, USB Flash Drive.

**Unit-III**

Input Devices : Keyboard, Mouse, Light pen, Joystick, Touch Panels, Scanner (OMR, OCR, MICR etc.). Voice Recognition System, Portable hand held terminals for data collection.  
Output Devices: Printers (Serial, Line, Page, Inkjet Laser Printer), Plotters, Voice Generation System, Monitors.

**Unit-IV**

Types of Software: Application Software, System Software, Translators. System Utilities. Types of Languages: Machine Language, Assembly Language, High-Level Language -their Features, Advantages and Disadvantages.  
Operating System: Definition, need, Operating System services, functions of operating system.

**References:**

1. V. Rajaraman, "Fundamentals of Computers", PHI.
2. Sanders. D.H., "Computers Today", McGraw Hill Publications.
3. V. Rajaraman. "Introduction to Information Technology", PHI
4. R.K. Taxali: "Introduction to Software Packages", Galgotia Publications.

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## CS-OE-02 Windows and Office Automation Tools

	L/T	P	Total		Int	Ext	Total
Credits	3	1	4	Theory	25	50	75
				Practical	10	15	25

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### Unit-I

WINDOWS XP - Installing WINDOWS XP starting and quitting WINDOWS XP, Basic Elements of WINDOWS XP, My Computer, Network Neighbourhood, Sharing Devices, Windows Explorer (Files and Folder Operations), Control Panel, Accessories like Accessibility, Entertainment, Communication, System Tools, Paint Brush, Calculator, Calendar, Clock, Note Pad, Word Pad Etc.

### Unit-II

MS-WORD: Basic features of Word Processing, File-New, Open, Save, Print, Close, Page Setup, Edit-Find, Replace, Cut, Copy, Paste etc. View-various layouts, Zooming, Header, Footer, Toolbars, Insert-Variety types of objects, Files, Symbols, Date, Time etc, Format-Variety Styles, Auto format, Paragraph formatting, Bullets and numbering etc. Tools- Spell Checking, Word Count, Auto Correct, Languages etc, Tables- Insert, Delete, Update, Auto format and different operations on tables. Windows and Help.

### Unit-III

EXCEL : Excel worksheet, data entry, editing, cell addressing, ranges, commands, menus, copying & moving cell content, inserting & deleting rows and column, column formats, cell protection, printing, creating, displaying & printing graphs. Mathematical and Statistical Functions and Formulas.

### Unit-IV

MS PowerPoint: Introduction, PowerPoint elements -templates, wizards, views, colour schemes. PowerPoint menus options, sub-options, preparing presentation using different tools, working with drawing, templates, dialog boxes, building slides and slide shows.

### References:

- "Computer Concepts Windows and MS Office", Vikas Publishing House ISBN : 8125912398
- "MS Office in NutShell" Vikas Publishing House ISBN : 8125914463
- Rathbone Andy, "Windows XP for Dummies", IDG Books India (Published : 9/2001), ISBN : 8126502282.
- Tyler, Denise, "Windows XP Home And Professional Editions" BPB Publications (Published :

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## CS-OE-03 Introduction to Cyber Space

	L/T	P	Total		Int	Ext	Total
Credits	3	1	4	Theory	25	50	75
				Practical	10	15	25

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### Unit-I

Basics of internet and Intranet, Applications of Internet, Evolution of Internet, Internet Service Provider (ISP).

Introduction to HTML, Structure of HTML, Web Page, Head and Body Sections, General structure of HTML tags-starting and ending a tag, various text formatting tags in HTML, Adding images, audio and video objects, Hyper linking.

### Unit-II

Email: Basic Introduction, Advantages and Disadvantage, Structure of an E-Mail Message, Working of E-Mail (sending & receiving messages), Managing Email (creating new folders, deleting messages, forwarding messages, filtering messages), Configuration of Outlook Express.

### Unit-III

Introduction to the Functionality of Web Browsers: Internet Explorer, Netscape Navigator Concept of WWW, surfing through web sites. Web Browsing (opening, viewing, saving a web page and book mark). Searching and downloading of different sites and software.

### Unit-IV

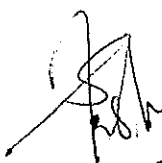
Introduction to Social Media: Twitter, Facebook, YouTube, Whatsapp, LinkedIn, their advantages/disadvantages and issues.


Introduction to E-commerce, its history, advantages, challenges, payment issues, legal issues.

### References:


1. Ritendra Goel, "e-commerce", New Age International Publisher, 2008
2. Dougals E Comer, "Computer Network and Internet", Pearson, 2008
3. Powell. "HTML. Tata McGraw-Hill, ISBN : 0074633325
4. Khurana, R., "HTML":, APH Publishing
5. Pascal Press, "Internet", Pascal Press (Published : 7/2002), ISBN : 1740202198
6. Heathcote, "Internet Right From The Start" BPB Publications, ISBN : 8176566977

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## CS-OE-04 Introduction to Multimedia

	L/T	P	Total		Int	Ext	Total
Credits	3	1	4	Theory	25	50	75
				Practical	10	15	25

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### Unit-I

**Introduction:** Basics of multimedia, components of multimedia, web and internet multimedia applications, transition from conventional media to digital media. Zipping and Unzipping of files and Folders, Zipping and Mailing, Uses of Different Types of Compression techniques.

### Unit-II

**Audio Fundamentals and Representations:** Digitization of sound, frequency and bandwidth. decibel system, data rate, audio file format, MIDI, MP3, MP4, Wave, AIFF, AAC, compression and transmission of audio on Internet, audio software and hardware.

### Unit-III

**Image Fundamentals and Representation:** Introduction to Image compression and file formats (GIF, JPEG, JPEG 2000, PNG, TIFF, EXIF, PS, PDF), Uses of image editing software.

### Unit-IV

**Video Fundamentals and Representation:** Video basics, broadcast video standards, analog video, digital video, video recording and tape formats, video compression and file formats. Video compression based on motion compensation (MPEG-1, MPEG-2, MPEG-4, MPEG-7, MPEG-21), and other types of video formats (DAT, AVI).

### Reference

1. Tay Vaughan, "Multimedia making it work", Tata McGraw-Hill, 2008.
2. Rajneesh Aggarwal & B. B Tiwari, "Multimedia Systems", Excel Publication, NewDelhi, 2007.
3. Li & Drew, "Fundamentals of Multimedia", Pearson Education, 2009.
4. Parekh Ranjan, "Principles of Multimedia", Tata McGraw-Hill, 2007
5. Anirban Mukhopadhyay and Arup Chattopadhyay, "Introduction to Computer Graphics and Multimedia", Second Edition, Vikas Publishing House.

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