

## Certificate/Diploma Programme in IT Enabled Services

### Duration of the Course:

- 1) Certificate course: 6 months
- 2) Diploma: 12 months

**Eligibility:** Any student enrolled in degree program of the college.

### Outline of the Course

Sr. No.	Topics	
<b>Topics covered under Certificate Course are Sr. No. 1,2 and 3</b>		
1	GC-IT-01T Fundamentals of IT	Credits: 6
2	GC-IT-02T Office Automation GC-IT-02P Office Automation Lab	Credits: 6 (4 Th. 2 Lab)
3	GC-IT-03T E-Commerce & Social Media GC-IT-03P E-Commerce & Social Media Lab	Credits: 6 (4 Th. 2 Lab)
<b>Topics covered under Diploma Course are Sr. No. 1,2,3,4,5 and 6</b>		
4	GC-IT-04T Basic Communication Skills	Credits: 6
5	GC-IT-05T Fundamentals of Digital Marketing	Credits: 6
6	GC-IT-06 T Introduction to Web Programming	Credits: 6 (4 Th. 2 Lab)

# **SEMESTER- I**

## **FUNDAMENTALS OF IT (CREDITS: 6)**

**Total Marks: 100**  
**External Marks: 70**  
**Internal Marks: 30**  
**Credits: 6**  
**Pass Percentage: 40%**

### **Section A**

*Unit I: Introduction of Computer:* Characteristics of the Computer, Block diagram of a Computer, Classification and Generations of Computer, *Input Devices:* Keyboard, Mouse, Trackball, Space ball, Joystick, Light pen, Touch screen, Digitizer, Data Glove, Scanner, Speech Recognition Devices, Optical Recognition Devices: OMR, OBR, OCR, MICR, Video Cameras, *Output Devices:* Monitors, Printers and its types, Plotters and its types, Speakers, Multimedia Projector.

*Unit II: Computer languages:* Machine language, assembly language, high level language, 4GL. *Language Translators:* Compiler, Interpreter, and Assembler. *Software:* Types of Software: System Software, Application Software, and Firmware. *Memories:* Memory Hierarchy, Memory Types: Magnetic core, RAM, ROM, Secondary, Cache, Overview of storage devices: floppy disk, hard disk, compact disk, tape.

*Unit III: Operating System:* Functions of Operating System, Types of Operating System, Types of Operating System, Windows concepts, features, windows structure, desktop, taskbar, start menu

*Unit IV: Basics of Computer:* Turning on a computer, booting up, Desktop, Shortcut, Icons, Recycle Bin, Start Menu, My Computer, Computer's Devices and Drives, Storage, Removable Storage, CD/DVD Drive, floppy drive, and USB flash drive, Hard drive, Control Panel, The Window, Parts of Window, File Explorer, Files, Folders, Directories, Command, Menus, Keyboard, Function Keys, Normal Keys, Special keys, Direction keys, Numeric Keypad, Numeric Keys, Mouse: Left button, Right Button, Windows Accessories, Sharing Information between Programs. Virus, Antivirus, Peripherals can use with your computer

## **Section B**

*Unit V: Computer Networks:* Components of data communication, modes of communication, standards and organizations, Network Classification, Network Topologies; Network Types, Transmission media, network protocol; layered network architecture. Basic of Computer networks: LAN, MAN, WAN.

*Unit VI: Introduction to Internet:* Evolution and Applications of Internet, Web Essentials: Clients, Servers, and Communication, Different ways to connect to the Internet, downloading, uploading, Browser, Secure browsing, Working with different Web Browsers, Web Address, Website, Portal, Webpage, Internet Protocols, Internet chatting; Intranet, Extranet, Gopher, Mosaic, WAIS, Cybersecurity: hacking and ethical hacking.

*Unit VII: Information Technology and Society:* Applications of Information Technology in Business and Industry, Railway, Airline, Entertainment, Banking, Insurance, Inventory Control, Hotel Management, Education and Training, Mobile Phones, Information Kiosks, Weather Forecasting, Scientific Application

*Unit VIII: Current Trends in IT Application:* AI, Virtual Reports, Robots, Multimedia Technology. Advanced Trends in IT: Mobile Internet, GPS, 3G, 4G, Wi-Fi, Bluetooth, Cloud Technology, Virtual Reality, Nanotechnology

## OFFICE AUTOMATION (THEORY) (CREDITS: 4)

**Total Marks: 100**

**External Marks: 70**

**Internal Marks: 30**

**Credits: 4**

**Pass Percentage: 40%**

### Section A

*Unit I: Word Processing Package:* Opening, saving and closing an existing document; renaming and deleting files. *Using styles and templates:* Introduction to templates and styles; applying, modifying, Using a template to create a document, creating a template, editing a template, organizing templates, examples of style use, changing document views

*Unit II: Working with text:* select, cut, copy, paste, find and replace, inserting special characters, setting tab stops and indents. *Formatting:* Formatting text, formatting paragraphs. Bullets and Numbering, Spell Check, Auto Correct, Auto Text, *Formatting pages:* Using layout methods, creating headers and footers, Numbering pages, Changing page margins, Adding comments to a document, Tabs.

*Unit III:* Creating a table of contents, Creating indexes and bibliographies, Printing a document, Tracking changes to a document. *Formatting Text:* Using RIGHT, LEFT, and MID functions; format text by using UPPER, LOWER, and PROPER functions.

*Unit IV:* format text by using the CONCATENATE function, generating inference from Data: Pivot Table, Creating Charts, Data Cleaning: Removing duplicate values, Text to Columns, Converting a word document into various formats.

### Section B

*Unit V: Electronics Spreadsheets: Excel:* Starting Excel, Excel Application Window, Components of Excel window, Anatomy of Excel Worksheet, Excel features, Undo and Redo, Printing, MS Excel Help,

*Unit VI: Working with Workbook and Worksheet: Workbook:* Creating Workbook, Opening and Exiting Workbook, Saving Copy, Closing Workbook. *Worksheet or Spreadsheet:* Inserting Worksheet, Deleting Worksheet, Renaming Worksheet, Cell, Cell Range, Manipulating Cell Contents, *Reference:* Absolute Reference, Relative Reference, Mixed Reference, Create and use basic formulas and functions. Different statistical function, Hide or unhide worksheets, Hide or unhide columns and rows

*Unit VII: Graphs & Charts:* Pie chart, Series chart. Line and area chart, Column chart, Bar chart variation. Apply chart layout, Add label, Change the style of chart, financial data visualization using graph and charts. *Pivot Table:* Functions performed on Pivot Table, Creation of Pivot table, Pivot chart, Creation of Pivot chart, Pivot chart Vs table, and Pivot tool.

*Unit VIII: PowerPoint:* Introduction, Structure of the Presentation, Creating and opening presentation, closing presentation, saving presentation, Exporting presentation, sharing presentation. Inserting new slide, adding, copying and deleting slides, Customizing slides, Text in slides, Applying themes, Adding tables and charts in the presentation, Adding pictures, audio and video in the presentation, printing the presentation, play the presentation.

## **OFFICE AUTOMATION (LAB) (CREDITS: 2)**

**Total Marks: 100**

**External Marks: 70**

**Internal Marks: 30**

**Credits: 2**

**Pass Percentage: 40%**

The programs in lab will be based on the contents covered in the theory syllabus.

1. Create, open, save and close a document.
2. Typing, coping, moving and deleting a word document.
3. Cut and copy, paste and paste special, save and save as
4. Text formatting: font size, font style, font color, subscript, superscript, upper/lower case etc.
5. Text alignment and character spacing
6. Indention and line spacing
7. Border and shading
8. Bullets and numbering
9. Find and replace and data sorting in a word document
10. Protect the document
11. Add chart in a word document. Create different types of charts in word document.
12. Size, margin, orientation of the page, hyphenation, columns and line numbers in word document.
13. Page color, page border, themes and watermarks in word document.
14. Adding tables, headers/footers, pictures, page numbers, special symbols, text box in word document.
15. Showing ruler, gridlines, document map, thumbnails, inserting word art, drop cap, hyperlink, and equation in word document.
16. Arranging, splitting windows in MS word.
17. Mail merge in MS word.
18. Create and run macros in MS word.
19. Set the print properties in word document.
20. Create, open, save and close a workbook.
21. Create a new worksheet, renaming, and moving sheet.
22. Entering, copying, moving and deleting data in cells and worksheets.
23. Insert and delete cells, columns and rows in MS Excel.
24. Formatting of data in cells.
25. Text formatting (font size, font style, font color, cell border etc.)
26. Text alignment

27. Text orientation, text direction, text control
28. Find and replace data in a sheet
29. Perform data sorting and data filtering in MS Excel.
30. Protect your worksheet and workbook.
31. Enter and perform some basic formulas in MS Excel.
32. Perform some basic functions in MS Excel.
33. Create different types of charts in MS Excel.
34. Set a size, margin, orientation of page in MS Excel.
35. The print properties of a worksheet in MS Excel.
36. Hide and unhide row and column in MS Excel.
37. Set column width and row height in MS Excel.
38. Adding text box, header/footers, pictures and special symbols in worksheet.
39. Arranging, splitting and hiding windows in MS Excel. And also freezing panes.
40. Create and run macros in MS Excel.
41. Create five Power point slides. Each slide should support different format. In these slides explain areas of applications of IT. Make slide transition time as 10 seconds.
42. Create five Power Point slides to give advantages/disadvantages of computer, application of computers and logical structure of computer.
43. Create five Power Point slides detailing the process of internal assessment. It should be a self-running demo.

## **E-COMMERCE & SOCIAL MEDIA (THEORY) (CREDITS: 4)**

**Total Marks: 100**

**External Marks: 70**

**Internal Marks: 30**

**Credits: 4**

**Pass Percentage: 40%**

### **Section A**

*Unit I: Introduction to E-Commerce:* Meaning and concept, Types of E-Commerce, Importance in the context of today's business, technical components, functions, advantages of e-commerce as compared with traditional system of commerce, disadvantages and scope of e-Commerce, difference between e-commerce and e-business, Internet and its relation to e-commerce. State of e-commerce in India, problems and opportunities of e-commerce in India.

*Unit II: Framework of E-Commerce:* B2B, B2C, C2C, and C2B. Supply Chain Management, product and service digitization; Planning Online-Business: Web sites as market place, E – commerce, pure online vs. brick and click business.

*Unit III: Operations of E Commerce: Electronic Payment Systems:* Special features required in payment systems for e-commerce, Types of e-payment system; cash and currency servers, e-cheques, credit cards, smart cards, electronic purses and debit cards, Digital Cash, Electronic Cheque, Smart Card, Credit/Debit Card E-Money, Bit Coins and Crypto currency, Electronic Fund Transfer (EFT), Unified Payment Interface (UPI), Immediate Payment System (IMPS), Digital Signature and Certification Authority. Risk management options for e - payment systems. E-Marketing: Concept, types of e-marketing, means of advertising [Banner, Pop-up, sponsored link, email], ebranding. E-Finance: Areas of e-financing: e-banking and e-trading; E-Accounting.

*Unit IV: Security and Legal Aspects of E-Commerce:* Threats in E-Commerce, Security of Clients and Service-Provider; Cyber Law - Information Technology Act 2000: An overview of major provisions.

### **Section B**

*Unit V:* Search Engine, E-mail, WWW, FTP, TELNET, IRC, Video conferencing, Skype, Zoom, Webex, Online shopping, *Blog Basics:* Introduction of blogs, developing blogs, designing blogs, RSS Reader, Blog services: Traditional blog services & Microblogging services, Improving blog's readability, Copyright in blog, Pinterest, Snapchat.



Unit VI: *YouTube*: Introduction, Advertisements on YouTube, Searching videos on YouTube, Understanding and adjusting privacy settings, Parental controls and restricted mode, Creating your own YouTube channel, Uploading your own videos, Earning money through YouTube. *Whatsapp*: Introduction, Creating Whatsapp account, Text messages, Voice calls, Deleting a Whatsapp account.

*Unit VII*: Creating a Facebook account, Need of Facebook privacy, Understanding and adjusting privacy settings, Timeline and tagging settings, Blocking unwanted communication, Sharing on Facebook, Social plug-ins, Chat and Messages, Unfollow and unfriend, Facebook groups, Creating Facebook page, Forget password and recovering account information, Deactivating Facebook account, Deleting Facebook account. Creating an Instagram account, Navigating Instagram, Sharing photos on Instagram, Sharing videos on Instagram, Searching and following on Instagram, Understanding and adjusting privacy settings, Deleting Instagram account

*Unit VIII: LinkedIn*: Introduction, Why LinkedIn, Creating a LinkedIn account, Navigating LinkedIn, Creating LinkedIn profile, Tips for an effective profile, Adding connections on LinkedIn, Searching for jobs on LinkedIn, Understanding and adjusting privacy settings, Deleting LinkedIn account. *Twitter*: Introduction, Creating a twitter account, Steps to tweet, What is hashtag?, Following and connecting on twitter, Customizing twitter account, Understanding and adjusting privacy settings. Deleting twitter account.

**E-COMMERCE & SOCIAL MEDIA (LAB) (CREDITS: 2)**

**Total Marks: 100**

**External Marks: 70**

**Internal Marks: 30**

**Credits: 2**

**Pass Percentage: 40%**

The programs in lab will be based on the contents covered in the theory syllabus.

## **SEMESTER-II**

### **BASIC COMMUNICATION SKILLS (CREDITS: 6)**

**Total Marks: 100**

**External Marks: 70**

**Internal Marks: 30**

**Credits: 6**

**Pass Percentage: 40%**

#### **Section A**

**Unit I: Understanding Human Communication:** Constitutive Processes of Communication, Language as a tool of communication, Barriers to Effective communication, Strategies to Overcome the Barriers.

**Unit II: Communication:** Non-Verbal Communication, Importance of Non-Verbal Communication, Non-Verbal Communication and Cultural influences.

**Unit III: Listening Comprehension:** Difference between Hearing and Listening, Effective Listening Strategies, Listening in Conversational Interaction.

**Unit IV: Speaking Skills: Expressions in different Communicative Functions:** Asking Questions; Making Requests and suggestions; Expressing Greetings, Apologies and Gratitude Job Interviews, Group Discussions, Presentation Skills.

#### **Section-B**

**Unit V: Reading Comprehension:** Introduction, Reading Process, Reading different kinds of Texts, Reading Methods- Using KWL for reading comprehension.

**Unit VI: Effective Written Communication:** Constituents of Effective Writing, Coherence and Cohesion for effective writing.

**Unit VII: Business correspondence I:** Letter writing, Resume/CV, E mails for Communication.

**Unit VIII: Business correspondence-II:** Writing Reports, Describing Tables and Charts, Meetings: Agenda and Minutes.

#### **Suggested Readings:**

1. Koneru, Aruna. Professional Communication. Delhi: McGraw. 8th Ed, 2017.

2. Mahanand, Anand. English for Academic and Professional Skills. Delhi: McGraw, 2013.
3. Rani, D Sudha, TVS Reddy, D Ravi, and AS Jyotsna. A Workbook on English Grammar and Composition. Delhi: McGraw, 2012.
4. Rizvi, M. Ashraf. Effective Technical Communication. Delhi: McGraw, 2nd Ed. 2017

## FUNDAMENTALS OF DIGITAL MARKETING (CREDITS: 4)

Total Marks: 100  
External Marks: 70  
Internal Marks: 30  
Credits: 4  
Pass Percentage: 40%

### SECTION A

*Unit-I:* Introduction to Digital Marketing: Concepts, Traditional Marketing vs. Digital Marketing, Digital Market Evolution, Career in Digital Marketing

*Unit-II:* Digital Consumer: Consumer Characteristics and profiles, Information Search Behavior, Factors Influencing Consumption Behavior

*Unit III:* Purchase Decision Process, Post Purchase Behavior and Management.

*Unit IV:* Digital Marketing Strategy: Digital vs Non- Digital Marketing Strategy, Digital Marketing Decisions- Product, Price, Distribution and Promotion

### Section B

*Unit V:* Digital Marketing Strategy Formulation and Execution, Digital Marketing Mechanisms: Websites- Company and Retail Service Providers, Search

*Unit-VI:* Unit-Engines- Google, Bing, Ask, Yahoo Video Hosting and Entertainment-Youtube, Wimeo, Amazon Prime, Netflix, Hotstar.

*Unit-VII:* Mobile Phones, E-Mails, Blogs

*Unit VIII:* Social Media: Facebook, Instagram, Twitter, Whatsapp.

### Reference Books:

- Seema Gupta, Digital Marketing, McGraw Hill Education
- Punit Singh Bhatia, Fundamentals of Digital Marketing, Pearson
- Philip Kotler, Marketing 4.0: Moving from Traditional to Digital, Publisher Wiley

## **INTRODUCTION TO WEB PROGRAMMING (CREDITS: 4)**

**Total Marks: 100**

**External Marks: 70**

**Internal Marks: 30**

**Credits: 4**

**Pass Percentage: 40%**

### **Section A**

Unit I: Introduction to Web Programming: Basic Concepts of WWW, Web page, Hyper Text Markup Language (HTML), Hypertext and Hypermedia, Hypertext Transfer Protocol, Server, Web Browsers, Uniform Resource Locator (URL), Domain Name, IP Address or Number, Characteristics of a Website.

Unit II: Web Programming: Client Side Scripting, Server Side Scripting, Static and Dynamic Websites, Frontend and Backend Development, Web Application Process Model, Web Programming Technologies: Programming Languages, Frameworks, Libraries, Databases.

Unit III : HTML: Introduction, HTML Tags, HTML DOM, Developing a Web Page, Commonly Used HTML Tags: Header and Footer, Text Formatting, Paragraphs, Text Style, Lists and Bullets, Creating Tables in HTML, Components of table, Border Attribute, Width and Height Attribute, Align Attribute, Cell Padding and Cell Spacing Attributes, Column Span and Row Span Attributes, Inserting Images in HTML, Hyperlinks, Hyperlink of an email, Hyperlink to another browser page, HTML Multimedia, HTML Plugins, HTML Forms

Unit IV: JavaScript-I: Introduction, JavaScript Syntax, JavaScript Program, JavaScript Variables, JavaScript Operators, JavaScript Data Types, JavaScript Functions, JavaScript Variable Scope: Global Scope, Local Scope, JavaScript Strings: String Length, Special Characters, Breaking Long Code lines, JavaScript Arrays: Converting Array to String, Popping and Pushing

### **Section - B**

Unit V: JavaScript - II: Introduction, JavaScript Switch, JavaScript Loops, JavaScript Events, JavaScript Forms, JavaScript - III: Introduction, DOM Introduction, DOM Methods, DOM Document, DOM Events, JavaScript Window Screen, JavaScript Window Location, JavaScript Window Navigator, JavaScript Popup Boxes

Unit VI: jQuery: Introduction, How to Use jQuery, jQuery Selectors, Element Selector, ID Selector, jQuery Events, jQuery Effects, jQuery hide() and show(), jQuery fadeIn and fadeOut methods, jQuery slideToggle method, jQuery GET / SET, jQuery Get method, jQuery Set method, jQuery Ajax, Form Validation

Unit VII: AngularJS: Introduction, AngularJS Development Environment, Expressions in AngularJS, AngularJS Directives, Data Binding, AngularJS Model Modes, One Way Binding, Two Way Binding, AngularJS Controller, AngularJS Scope, AngularJS Filters, AngularJS Forms

Unit VII: Web Security: Introduction, Web Security, The Principles of Web Security.

Availability, Authentication, Authorization, Confidentiality, Auditing, Integrity, Common Client- Side Attacks, Eavesdropping Attacks, Man-in-the-Middle Attacks, Cross Side Request Forgery, UI Redressing, Session Hijacking, Cross-Site Scripting, Security Threats, SQL Injection, Form Validation and Security, CAPTCHA Role and Implementation

## **INTRODUCTION TO WEB PROGRAMMING LAB (CREDITS: 2)**

**Total Marks: 100**

**External Marks: 70**

**Internal Marks: 30**

**Credits: 2**

**Pass Percentage: 40%**

The programs in lab will be based on the contents covered in the theory syllabus