

# II Semester Open Elective Computer Science

## Fundamentals of Computer Application

Number of hours per Week: 4 hrs  
Number of Credits: 4 credit  
Marks

Max. Marks: 100 marks  
Internal Assessments: 30

Theory Marks: 70 marks

### **Unit I:** **13 hours**

Introduction to Computer, Generations of Computer (I-V) , Block Diagram of a Computer, Functions of the Different Units Input unit, Output unit, Memory unit, CPU (ALU+CU). Input & Output Devices Input Devices: Keyboard, Point and draw devices mouse, joystick, track ball, light pen Data Scanning devices image scanner, OCR, OMR, MICR, Bar code reader, card reader d) Voice Recognition Device, Digitizers Output Devices: Monitor, Printer laser printer, dot matrix printer, ink jet printer, Projector Memories [Memory hierarchy], Registers [Types of Registers] ,Cache Memory ,Primary Memory ,RAM, ROM, Types of ROM , Secondary Memories ,Hard disk ,Structure of a hard disk, how data is stored in a hard disk, concept of tracks, sectors, clusters, cylinders ,formatting of hard disk, Floppy ,CD.

### **Unit II:** **13 hours**

MS Word: Create a new document, open, save and print a document, Edit and format text, Change the page layout, background and borders. Insert headers and footers. Insert and edit tables. Insert clip art and pictures to documents. Perform a mail merge. Share and review shared document files.

### **Unit III:** **13 hours**

MS Excel: Examine spreadsheet concepts and explore the Microsoft Office Excel environment. Create, open and view a workbook. Save and print workbooks. Enter and edit data. Modify a worksheet and workbook. Work with cell references. Learn to use functions and formulas. Create and edit charts and graphics. Filter and sort table data. Work with pivot tables and charts. Import and export data.

### **Unit IV:** **13 hours**

Examine slide show presentation concepts and explore the Microsoft Office PowerPoint environment. Create a new presentation. Modify presentation themes. Add and edit text to slides. Add new slides to a presentation. Insert clipart images and shapes to slides. Insert and modify tables and charts. Add sound and video to a slide presentation. Insert and edit animations and slide transitions. Display a speaker-lead and self-running presentation.

### **References:**

1. *Fundamentals of Computers by Rajaraman V*
2. *Computer Fundamentals Paperback, by [P. K. Sinha](#)*
3. *Microsoft Office Access 2007: The Complete Reference.*
4. *MS-Office 2007 Training Guide by S. Jain*
5. *MS-Office 2007 by Mr. Kalpesh Patel*
6. *Computer Fundamentals by D.P. Nagpal*

# III semester open elective

## Computer Science

### E-COMMERCE

Teaching: 4 hrs./week ( 4 CREDIT)  
Total Hours : 52Hrs

Max. Marks: 70  
I. A. Marks: 30

#### UNIT-1:

Internet and commerce: Business Operations; e-commerce practices versus traditional business practices; concepts B2B;B2C,C2C,G2H, and G2C,benefits of e-commerce to organization, consumers etc. Limitations of e-commerce. **13 HRS**

#### UNIT-2:

e-commerce operations: Credit card transaction, secure hyper-text transfer protocol(SHTP), Electronic payment systems; Secure Electronic Transactions(SET); Cyber Cash; Indian Payment Models. **13 HRS**

#### UNIT-3;

Applications in B2B: Consumer's shopping procedure on the internet; Impact on dis-intermediation and re-intermediation, global market; strategy of traditional department stores; products in B2C model; Success factors of e-brokers, benefits and impact of e-commerce on travel industry, Online stock trading and banking- its benefits, e-auctions. **13 HRS**

#### UNIT-4

Applications in B2B: Applications of B2B; key technologies for B2B, architectural models of B2B, characteristics of the supplier-oriented market place, Buyer oriented market place, benefits of B2B on procurement re-engineering; Time delivery in B2B; marketing issues inB2B. **13 HRS**

### **Reference Books:**

1. David Whiteley, E-Commerce: Strategy, Technologies and Applications, Tata McGraw Hill Education Private limited.
2. Ravi Kalakota, Andrew B. Whinston, Frontiers of Electronic Commerce, Addison-Wesley Publications.
3. C. S. V. Murthy, E-commerce: Concepts, Models, Strategies, Himalaya Publishing House

# IV semester open elective

## Computer Science

### INTRODUCTION TO 'C' LANGUAGE

**Teaching: 4 hrs./week ( 4 CREDIT)**  
**Total Hours : 52Hrs**

**Max. Marks: 70**  
**I. A. Marks: 30**

#### **UNIT-1:**

History of 'C', Features and merits of 'C', Basic Structure of a C program, character set, keywords, Identifiers, Data types, Constants and Variables, Data type Declaration statement, Assigning Values to a variable, Operators, Expressions, Loading, saving and Executing C programs.

**13 Hrs**

#### **UNIT-2:**

Meaning and definition of ALGORITHMS AND FLOW CHART symbols and functions.  
Example of simple mathematical oriented problems

**13 Hrs**

#### **UNIT-3:**

Input/Output Functions(scanf, printf), Program Flow Control statements, Branching statements, Looping statements, Jumping statements, If statement, If-Else statement, switch statement, While statement, Do-while statement, Nested For statement.

**13 Hrs**

#### **UNIT-4:**

Language involving Arithmetical Operations- Number Generations of Various types- Natural Numbers, Even and Odd numbers, Multiplication Table, Fibonacci series, factorial of a number, use of formulas-simple interest, compound interest, Area calculations, rectangle and triangle etc.

**13 Hrs**

#### **Reference Books:**

1. Rajaraman, V.Fundamentals of Computers, 2nd Edition. Prentice Hall India Limited
2. Kanetkar, Yashavant, Let Us C, 4th Edition, BPB Publications
3. Balagurusamy, E Programming in ANSI C 2nd Edition. Tata McGraw – Hill
4. P.B.Kotur, Computer Fundamentals & 'C' programming

# V semester open elective

## Computer Science

### NETWORK AND INTERNET

**Teaching: 4 hrs./week ( 4 CREDIT)**  
**Total Hours : 52Hrs**

**Max. Marks: 70**  
**I. A. Marks: 30**

#### **UNIT-1:**

Number System: Binary, octal, decimal & Hexadecimal number system . Binary arithmetic: Addition, Subtraction-using 1's and 2's complement. Digital Logic:AND,OR,NOT,NAND,NOR,Universal Gates. **13 hrs**

#### **UNIT-2:**

Concept of Networking-LAN, WAN, MAN, Internet, Intranet & Extranet, Definition of Web Page and HTML, Website and Web addresses, Web Browsing Tools – Internet Explorer/Netscape Navigator, ISP's in India and their responsibilities, E-mail, chatting, video Conference, Search Engines, Downloading and Uploading files. **13 hrs**

#### **UNIT-3:**

Internet Applications and E-commerce. Introduction, some definitions of internet, internet services. Creating E-mail id,E-commerce, advantages and disadvantages of E-commerce. Types of E-commerce. **13 hrs**

#### **UNIT-4:**

HTML: Introduction, a html document, markup tags, heading, paragraphs, text formatting, list, inline images, linking Executing html programs. **13 hrs**

#### **Reference Books:**

- 1. P.B. Kottur, Computer concepts & C Programming 17<sup>th</sup> edition.**
- 2. Rajaraman, V.Fundamentals of Computers, 2nd Edition. Prentice Hall India Limited**
- 3. Sanjay Saxena, A first course in Computer, Vikas Publishing.2**