FUNDAMENTALS OF COMPUTERS

Course Code: PGMTH3I001T

Course Title: FUNDAMENTALS OF COMPUTERS

Semester: III

COURSE OBJECTIVES

- To provide an understanding of the fundamental concepts of computer system.
- To make familiar with basic computer softwares and computer languages.
- To acquire a knowledge of data representation in computer systems.
- To provide hands-on use of Microsoft Office applications Word, Excel and PowerPoint.

Contents	No. of Lectures
Unit - I Introduction: Introduction to Computers, Classification of Computers, Analog vs. Digital Computer, Block Diagram of Digital Computer, Input Devices, Output Devices, CPU, Memory, Types of Memories, Storage Devices, Different types of Softwares.	10
Unit - II Data Representation: Representation of characters in computers, Representation of integers and fractions, Hexadecimal and octal representation of numbers, number system conversions, Two's complement of numbers, addition/subtraction of numbers using 2's complement notation.	10
Unit -III Word Processing: Introduction to MS-Word and its features, Formatting text and paragraph, Page Formatting, Find and Replace, Inserting page number, Symbols, footnotes, endnotes, textbox, auto text , pictures, tables, Drawing Shapes, Mail Merge, Printing of documents, Spelling & Grammar, Thesaurus etc. Preparing document for report writing, formatting of reports.	10
Unit - IV Presentation Software: Introduction to MS-PowerPoint, Slide Layouts, Slide Designs, Task Pane, Header and Footer, Text Formatting, Inserting slide number, Symbols, Comments, Textbox, Pictures, Slide Show, Slide Transition, Slide Animation, Customize show, Rehearse Timing, Record Narrations, Notes.	10
Unit - V Spreadsheet: Introduction to MS-excel ,Cell-Referencing-relative and absolute, Entering Data and Formula, Excel Workbook, Inserting and Renaming Sheets, Automatic Calculation and Recalculation, Formatting Cells, Rows, Columns and Sheets, Sorting and Filtering Data, Formulas-Mathematical, Statistical and Logical Functioning, Preparing Charts and Analysing Data.	10

COURSE OUTCOMES

After completion of course, students would be able to:

- Understand the basic concepts of computer systems.
- Describe the organization and operation of computer processor, peripheral devices and to give computer specifications.
- Recognize the different types of number systems as they related to computers.
- Use Microsoft Office programs to create personal, academic and business documents.

Teaching Plan

S.No.	Topic	No. of Lectures	Reference
Unit-I			
1	Introduction to Computers	**1**	T1: Chapter 1
2	Classification of Computers	**1**	T1: Chapter 1
3	Analog vs. Digital Computer	**1**	T1: Chapter 1
4	Block Diagram of Digital Computer	**1**	T1: Chapter 1
5	Input Devices	**1**	T1: Chapter 2
6	Output Devices	**1**	T3: Chapter 5
7	CPU, Memory	**1**	T3: Chapter 6
8	Types of Memories	**1**	T3: Chapter 4
9	Storage Devices	**1**	T3: Chapter 4
10	Different Types of Softwares	**1**	T3: Chapter 5
Unit-II			
11	Representation of characters in computers	**1**	T2: Chapter 6
12	Representation of integers and fractions	**1**	T2: Chapter 6
13	Hexadecimal and octal representation of numbers	**2**	T2: Chapter 6
14	Number system conversions	**2**	T2: Chapter 6
15	Two’s complement of numbers	**2**	T2: Chapter 6
16	Addition/subtraction of numbers using 2’s complement notation	**2**	T2: Chapter 6
Unit-III			
17	Introduction to MS-Word and its features	**1**	T5: Chapter 3
18	Formatting text and paragraph	**1**	T5: Chapter 7
19	Page Formatting	**1**	T5: Chapter 13
20	Find and Replace	**1**	T5: Chapter 12
21	Inserting page Number, Symbols, Footnotes, endnotes	**1**	T5: Chapter 12
22	Inserting textbox, auto text, pictures, tables	**1**	T5: Chapter 12
23	Drawing Shapes, Mail Merge	**1**	T5: Chapter 12
24	Printing of Documents, Spelling and Grammar	**1**	T5: Chapter 13
25	Preparing document for report writing	**1**	T5: Chapter 12
26	Formatting of reports	**1**	T5: Chapter 12
Unit-IV			
27	Introduction to MS-PowerPoint	**1**	T4: Chapter 16
28	Slide Layouts, Slide Designs, Task Pane	**1**	T4: Chapter 16
29	Header and Footer, Text Formatting, Inserting Slide Number, Symbols, Comments, Text box, Pictures	**3**	T4: Chapter 16
30	Slide Show, Slide Transition, Slide Animation, Customize Show	**4**	T4: Chapter 16
31	Rehearse Timing, Record Narrations, Notes	**1**	T4: Chapter 16
Unit-V			

32	Introduction to MS-Excel	**1**	T5: Chapter 21
33	Cell-Referencing-relative and absolute	**1**	T5: Chapter 21
34	Entering Data and Formula, Excel Workbook	**1**	T5: Chapter 21
35	Inserting and Renaming Sheets, Automatic Calculation and Recalculation	**1**	T5: Chapter 21
36	Formatting Cells, Rows, Columns and Sheets, Sorting and Filtering data	**1**	T5: Chapter 21
37	Formulas-Mathematical	**2**	T5: Chapter 21
38	Statistical and Logical Functioning	**1**	T1: Chapter 21
39	Preparing Charts and Analysing Data	**2**	T1: Chapter 21

Evaluation Scheme:

S. No.	Exam	Marks	Duration of Exam.	Coverage/Scope of Examination
1	Mid Term Exam.	25	2 Hours	Two to Three Units
2	End Term Exam.	50	3 Hours	All Five Units
3	Teachers Continuous Assessment	25	Entire Semester	Assignments, Quizzes, Tests, Projects, Presentations etc.

Text /Reference books:

T1. Pardeep K. Sinha & Priti Sinha, “Computer Fundamentals”, BPB Publications, 6/e, 2011.
T2. V.Rajaraman, “Fundamentals of Computers”, PHI Learning Private Limited, 5/e, 2011.
T3. E Balagurusamy,” Fundamentals of Computers”, TMH second reprint, 2010.
T4. Reema Thareja, “Fundamentals of Computers”, Oxford University Press, 2014.
T5. Rohit Khurana,“Learning MS-Word and MS-Excel”, APH Publishing Corporation, 2010.