

COMPUTER APPLICATIONS (15PH404)

UNIT-I

Introduction: Introduction computer, Generation and Classifications of computer (According to size and use) Hardware: Architecture of a microcomputer, CPU, ALU, Internal memory (RAM & ROM), various peripheral devices such as Input devices, Output devices, Storage devices. Various ports and slots such as PCI, Parallel, Serial, PS/2, USB etc. Number System: Binary, Octal and Hexadecimal Number Systems. Addition and subtraction binary numbers (1's & 2's complement method)

Software: Introduction to software. Different computer languages (such as Machine, Assembly and High-level languages). Classification of application software according their use.

UNIT-II

Operating Systems: Introduction to various operating systems, Different Type of file manipulation and storage management such as Directory/folder handling, Copy, moving , deleting, searching etc of files. Various storage maintenance tasks such as Checking, Scanning, and Formatting storage device (eg. HDD or Pen drive, DVD etc) by using the Windows-XP & Linux Application of Computers in Pharmacy: Various use of computer in pharmaceutical research and development, industries, education and hospitals.

UNIT-III

Programming with JAVA

Introduction to programming: Problem Analysis, algorithm, flow chart, coding, execution, debugging & testing and programming documentation.

Introduction to JAVA: History of Java, Introduction to OOP. Idea about class and objects, Java program structure, Java tokens and key words, identifiers, variables & constants, data types, declaration & initialization of variables, Operators and expressions, writing and running simple Java programmes using BlueJ.

UNIT- IV

Control statements: Decision making by using if, if...else, nested if..else, Switch..case statement. Looping statements like while, for, do..while statements. Input and output in Java: Input the values by using, Scanner & BufferedReader. Output the data by using println() method etc. Exception handling (simple cases only). Java Methods (functions): Definition, declarations and calling of Java methods, discussion about library methods(functions) to handle mathematical, character, string, date & time problems. Array: Introduction to array, Declaration & use of 1-D and 2-D array. Sorting and searching in 1-D array.

UNIT-V

Computer Networking: Introduction to Computer networking, Mode of transmission (simplex, duplex, Half-duplex). Classification of networking like LAN, MAN & WAN. Network topologies, Network protocols, OSI layers Internet: Introduction to internet, TCP/IP, Internet browsers, URL. Introduction to e-mail and its use. Important websites related to pharmaceutical information –like sites for information regarding drugs, medical

literature, plants, clinical data, patent sites, FDA, WHO etc.

RECOMMENDED BOOKS:

Computer Fundamentals, P.K.Sinha, BPB Publications

Computer Applications in Pharmacy -William and Fassett

The ABC's of the Internet - Cristain Crumlish, BPB Publications, N. Delhi – 01

PROGRAMMING WITH JAVA - E Balagurusamy, Amazon India

COMPUTER APPLICATIONS (PRACTICAL)

1. Demonstration of computer hardware.

2. Operating system: Windows & Linux

Understanding the sub-directories/folders, copying, moving, deleting & searching of files/folders etc

3. MS-WORD: Create and save a document in Ms-word, text editing, text formatting.

4. MS-EXCEL: Understanding a work sheet, Create and save a work-book file. Input various values of data types into a worksheet cell, using of formulas & functions and plotting of graph using Excel

5. Write Simple Java programmes in BlueJ Environment: At least 10 programmes should be developed in order to learn use of conditional statements, looping statements, Java methods, Array etc.

6. Preparing a presentation by using Power Point.

7. Use of Internet: Use of various search engines, creation and use of e-mail id and groups.

RECOMMENDED BOOKS:

1. Computer Fundamentals, P.K.Sinha, BPB Publications

2. Fundamentals of Computers, V. Rajaraman, Prentice Hall of India Pvt. Ltd., 1986.

3. Computer Applications in Pharmacy -William and Fassett -

4. The ABC's of the Internet - Cristain Crumlish, BPB Publications, N. Delhi – 01

5. Programming with Java - E Balagurusamy, Amazon India

6. Complete Reference MS- Office

7. Complete Reference Windows XP.

8. Complete Reference Internet