

COMPUTER APPLICATIONS

1

B.A. / B.Sc. - 1st Year

Refer No. → IITD 9211
B.A. - 17-17-16

Practical
50

Max Marks

B.Sc. - 25-125-125

75

Paper I

Computer Fundamentals

952

What is a computer - an introduction. Use of computers in modern society e.g. weather forecasting, census, oil exploration, speech recognition, banking, publishing, accounting, research etc.

Information concepts and processing - evaluation of information processing - data, information, language and communication.

Computer arithmetic and number systems. ASCII & EBCDIC character sets, Fundamentals of Boolean Algebra.

Elements of a computer processing system - hardware software computer capabilities and limitations. Concept of files and directories.

Hardware features and use - CPU, I/O devices. Storage devices and media.

Introduction to networking, multiprocessing, time sharing, multitasking and real time computing.

Variety of hardware systems and features. Various types of computers available in market. Micro, Mini and main frames, supercomputers.

Evolution of personal computers. Commodore, Atari, Apple. IBM PC. Basic block diagram of computer. Difference between personal and main frames - Simple operating system, Easy to use, Low memory, Dedicated, Normally single user.

Introduction to microprocessors and associated components. Buses, display controllers, DMA controllers.

Block diagram of IBM PC. Introduction to BIOS and BOBS. Functional description of various modules and cards.

Boot process in IBM PC. System files. Self test.

Various types of displays and other peripherals used in IBM PC. Introduction to Programming in BASIC, Development of Programs in BASIC. Use of various facilities using BASIC.

Visit to computer lab. Introduction to various components of a computer. A simple documentation preparation and printing. Usage of printer and other components.

Physical inspection of IBM PC and internal cards. Introduction to nomenclature (COM1, COM2, etc.). Writing batch files for various purposes. Modifying config.sys files. Creating IBM Disk. Diagnostics on IBM PC. Controlling PC hardware using basic programs.

Nand Kumar

11/11/16

COMPUTER APPLICATION
B.A./B.Sc. II YEAR

3

988

Paper I :- Database Management System

Integration of DBMS Systems. Network, Hierarchical and relation databases. Application of DBMS systems. Data Description Language. Data Manipulation Language and Data Control Language. Introduction to DBASE. DBASE commands. Development of an application under DBASE using forms, screens and PRG files. Security consideration in database management systems. Performance improvement in databases.

Practical I

Design of a database for a business application. Design of data entry forms and reports layouts for this database. Creation of programs to access and manipulate database.

981

950

956

Paper II :- Structured programming

Introduction. Need of structured programming. Methods of documentation. Methods of analysing a program requirements. Data flow diagrams. Entity relationship charts. Flow charts. Various categories of programming languages (3GL, 4GL, etc.). Introduction to C and COBOL. Program development in C using structured programming concepts.

Practical II

Development of a business application using C.

957

957

Paper III :- RDBMS & Computer Graphics

Relational databases- advanced Concepts. Introduction to ORACLE/INGRES or a similar RDBMS on a multiuser environment. Structured query language. From design on a advanced RDBMS. Report generator. Query by example and report by from. Accessing RDBMS using programming languages. System management, User management, Security consideration.

Why graphics. Various type of graphics programs. Drafting packages. DTP packages. Microsoft Windows. Various documentation cum DTP packages. e.g. WordPerfect. Microsoft Word etc.

Introduction to a Pagemaker / Ventura or a similar package. Preparation of documents using DTP packages. Formatting. Printing. Various fonts and character set. Various type of printing used in DTP. Introduction to commercial DTP systems available in market. Indian language fonts. Creation of Indian language fonts.

Practical III

Development of a business application in RDBMS. Managing a Microsoft window session. Creating groups and program items under windows. Tuning windows for a Computer system. Preparation of a document and publishing it using a DTP system. Creation of fonts.

T. R. Shetty
M. J. College
M. S. College
M. S. College

(Co-ordinator)
G. D. N. C.
M. S. C.

④

COMPUTER APPLICATION
SYLABUS FOR B.A./B.Sc IIIrd YEAR

Paper 1 : Computer Aided Design

⑨58

Introduction of AutoCAD & its used in various fields of CAD. Setting of drawing environment in AutoCAD for a plan of a building , e.g. System variables, prototype drawing, model space & paper space Drawing the plan of a building by AutoCAD using its various facilities e.g. Layers, Dimensions, Blocks, Hatching.

Paper 2 : Advanced Topics in Computer

⑨59

COMPUTER ANIMATION : Introduction to MultiMedia, Hardware for MultiMedia, Software for MultiMedia, Components of MultiMedia - Sound, Graphics, Animation. Application of MultiMedia

ARTIFICIAL INTELLIGENCE : Introduction to Artificial Intelligence & its importance, Artificial Intelligence & related fields, Concept of LISP, Introduction Knowledge based system, Fuzzy logic

DATA ENCRYPTION, DATA COMMUNICATION & NETWORKING : Introduction to communication & networking, Definitions of LAN, WAN, Network Topologies (BUS, RING, STAR), Types of Switching (Circuit switching, Packet switching) , OSI/RM Seven Layer Model , TCP/IP, Netware protocols (IPX, SPX, SAP), Applications of Networks.

Paper 3 : Job Training

Ist Year / IInd Year Job Training Reports. Project Report.

Practicals :

Design of layout of a building. Design of interior of its rooms. Printing & Plotting the prepared drawing,

Lami