ASSOCIATE DEGREE IN ARTS / SCIENCE

Computer Studies-I **Total Mark: 100**

Appendix 'A'

(Outlines of Tests)

Paper-A:	Introduction to Information Technology & Computer Programming (Written)	:	70 Marks
Paper-B:	Practical	:	30 Marks

Appendix 'B'

(Syllabi and Courses of Reading)

Paper-A: Introduction to Information Technology & Computer Programming 70 Marks
This paper will consist of two sections.

Section-I: Introduction to Information Technology 35 Marks

Overview of Computer Systems: Uses, importance, future needs; Types of Computers: super, mainframe, mini, micro, desktop, notebook, personnel, and workstations. Processing of Data: data and information, text codes. Part of Computer: CPU, control unit, arithmetic unit, memory, ROM, RAM, flash technology,, flash memory, cache memory, computer clock, control bus, data bus, address bus. co-processors, types of microprocessors. Interacting with Computer: input devices, e.g. key board, keys, arrangement on keyboard, mouse trackballs, touch pads pens, touch screens, barcodereaders etc; output devices: monitors, types of monitors, resolution, refresh rate, dot pitch etc. Printers: types of printers, plotters. Storage Devices: floppy disk, hard CD, tape disk, magnetic and optical storage Types of Software: Systems software, shareware, and application software. Operating Systems: operating systems user interface, running programs, managing files, managing hardware, utility programs. Network and Data Communication: uses of network. Types of Network: LAN, WAN, Pile Server, Client/Server, peer-to-peer. Network Topologies: bus, star ring. Network Media and Hardware, Network Software, Data Communication over Telephone Lines: modem, ISDN, Tl, T3 and ATM. Internet: How does internet works, backbones, gateways, addressing schemes. Features of Internet: email, news, telnet, FTP, gopher' chat' World Wide Web, online services. Accessing the Internet Application : connection through LAN. connection through modem, connection through high-speed lines.

Recommended Books:

1. Introduction to Computers" by Peter Norton.
2. Discovering Computers 2002", G.B. Shelly. TJ. Cashman and M.E. Vermatt.
3. Introduction to Computer Science", Scham's Series.

Section-II: **Computer Programming** **35 Marks**

Tool: Visual Basics:

Introductory Programming Concept: problem solving, algorithms and pseudo code. Programming Techniques : visual programming, event driven programming, object oriented programming, structured programming. Visual Basic Integrated Development Environment. Control Elements. Data Types. Variables and Assignment Statements. Arithmetic Operators and Scope: data conversions, expressions, variable scope, declaring form and project variables and constants. Modules and Procedures: sub-procedures, event procedures, function procedures, and optional, argument. Branching and Looping: procedures, function procedures, and optional argument. Branching and Looping: relational operators and logical expressions, logical operators, if-then-Else, Case, For- Next, Looping with Do and While Ipp: Menu and Dialog Boxes ; Arrays Searching and ! Sorting: what is array, declaring arrays, using arrays, control arrays, enumerations user defined types. Error Handling. Sequential Files: file details, file operators, add report to programs, programming with fixed report length. Introductory database programming: why use database, data control, and creating data-bound controls.

Recommended Books:

1. Computer programming with Visual Basic 6" by Alka R. Harriger, Susan K. Lisack.
2. Visual Basic 6: How to Program" by Deitel, Deitel and Nieto Prentice-Hall.
3. Visual Basic" by B. S. Gottfried (2001 Schaum's outlines.
4. Using Visual Basic (Special Edition)", by Brian Siler and Jeff Sports.

Paper-B: **Practical** **30 Marks**

Section-I: **15 Marks**

Windows 2000:

1. Exploring Windows 2000 work place: desktop component and customizing them exploring parts of a window, menu and dialog boxes, multitasking, and shutting down windows.
2. Working with the Accessories: calculator, notepad, wordpad, paint program, media player, etc.
3. Organizing files and folders using window explorer.
4. Using Windows System Tools, Working with Control Panel Installing new software and hardware
5. Using Internet: Working with Internet explorer, surfing with internet explorer, working with e-mail.

Word 2000:

1. Exploring Word 2000 work place: document, menus, toll bars, dialog boxes and other icons:
2. Saving and opening documents.
3. Editing and formatting text.
4. Formatting and printing documents
5. Working with tables and graphics
6. Working with Mail 'Merge and hyper links

Excel 2000:

1. Exploring Excel 2000 work place: workbook; worksheet, menus, toll bars, dialog boxes, and other icons.
2. Worksheet basic: entering data, editing worksheet, inserting & deleting cell, hiding data, copying data and auto fill.
3. Formatting and printing a work sheet.
4. Using functions in formulas.-
5. Creating chartsa and adding graphics.

Front Page 2000:

1. Exploring Front Page environment.
2. Designing documents: working from Page View.
3. Developing the basic page: text, list, and hyperlinks, tables, frames.
4. Enhancing pages with graphics and multimedia.
5. Publishing pages on the web.

Recommended Books:

1. "Microsoft Windows 2000 Professional : Comprehensive Course" by D. Busceh and M. Bergerud (2001).
2. "Teach Yourself: Microsoft Windows 2000-Professional" by B. Underdah.
3. "Microsoft Windows: millennium edition fast & easy', by D. Koers (2000).
4. '.Microsoft Word 2000 Simplified" from maran Graphics, IDG Books (1999).
5. "Learn Word 2000" by J. Preston. S. Preston, and R. Ferrett (1999).
6. "Excel for Windows 2000" by M.-Langer (1999).
7. "Microsoft Excel 2000: Comprehensive Course" by H.A. Napier and P.J. Judd
8. "Using Front Page 2000: special edition" by N. Randall and D. Jones (1999).
9. "Mastering Front Page 2000" by D.A. Tauber & et. al. (2001).

Section-II: **15 Marks**

Students must implement the concepts studied in theory part. For practice see examples given in "Computer programming with Visual Basic 6" by A. R. Harriger, S.K. Lisack and "Visual Basic 6: How to Program" by Deitel. Deitel and Nieto. Some practical examples AS guide line are given below:

1. Test if a given integer is odd or even.
2. Given the sides of a triangle, determine the type of the triangle.
3. Print integers in the specified range; make every alternate integer in the output negative.
4. Print Leap years in a give century.
5. Given two strings, count the number of times the second string appears in the first string.
6. Create a Program that convert Fahrenheit temperature to the Celsius scale and back again.
7. Search to a given name in an array of names.
8. Reverse an array.
9. Reverse a given string.
10. Build a scientific calculator.