B.Sc. (Data Science)
Discipline Specific Course (DSC)
Semester I
BSDB31102T: Fundamental of IT

Total Marks: 100
External Marks: 70
Internal Marks: 30
Credits: 4
Pass Percentage: 40%

Objective:

This course introduces the concepts of computer basics and working with word processor, spreadsheet, and presentation software packages. Basic concepts of information technology have also been explained in this course.

INSTRUCTIONS FOR THE PAPER SETTER/EXAMINER

1. The syllabus prescribed should be strictly adhered to.
2. The question paper will consist of three sections: A, B, and C. Sections A and B will have four questions from the respective sections of the syllabus and will carry 10 marks each. The candidates will attempt two questions from each section.
3. Section C will have fifteen short answer questions covering the entire syllabus. Each question will carry 3 marks. Candidates will attempt any ten questions from this section.
4. The examiner shall give a clear instruction to the candidates to attempt questions only at one place and only once. Second or subsequent attempts, unless the earlier ones have been crossed out, shall not be evaluated.
5. The duration of each paper will be three hours.

INSTRUCTIONS FOR THE CANDIDATES

Candidates are required to attempt any two questions each from the sections A and B of the question paper and any ten short questions from Section C. They have to attempt questions only at one place and only once. Second or subsequent attempts, unless the earlier ones have been crossed out, shall not be evaluated.

Section A

Unit I: Computer Fundamentals: Block diagram of a Computer, Characteristics of Computers, Hardware, Software, Machine Language, Assembly Language and Assembler, High Level Language and Compiler v/s Interpreter. Input Devices: Keyboard, Mouse, Joystick, Track Ball, Touch Screen, Light Pen, Digitizer, Scanners, Speech Recognition Devices, Optical Recognition devices – OMR, OBR, OCR. Output Devices: Monitors, Impact Printers - Dot matrix, Character and Line printer, Non Impact Printers – DeskJet and Laser printing, Plotter.

Unit II: Computer Memory: Representation of information: BIT, BYTE, Memory, Memory size; Units of measurement of storage; Main memory: main memory organization, RAM, ROM, PROM, EPROM, Computer languages: Machine language, assembly language, higher level language, 4GL. Introduction to Compiler, Interpreter, Assembler, System Software, Application Software. Introduction to Internet, WWW and Web Browsers

Unit III: **Basic of Computer networks;** LAN, WAN; Concept of Internet; Applications of Internet; connecting to internet; ISP; Knowing the Internet; Web Browsing software's, Search Engines; Understanding URL; Domain name; IP Address; Using e-governance website Basics of electronic mail; Getting an email account; Sending and receiving emails; Accessing sent emails; Using Emails;

Unit IV: Word Processing Package: Opening, saving and closing an existing document; renaming and deleting files; Using styles and templates: Introduction to templates and styles; applying, modifying; using a template to create

a document, creating a template, editing a template, organizing templates, examples of style use, Changing document views

Section B

Unit V: Working with text: select, cut, copy, paste, find and replace, inserting special characters, setting tab stops and indents, Formatting text, formatting paragraphs, Formatting pages: Using layout methods, creating headers and footers, Numbering pages, Changing page margins, Adding comments to a document, Creating a table of contents, Creating indexes and bibliographies, Printing a document, Tracking changes to a document.

Unit VI: Making Small Presentation: Basics of presentation software; Creating Presentation: Entering and Editing Text, Inserting And Deleting Slides in a Presentation, Inserting Word Table or An spreadsheet Worksheet, Adding Clip Art Pictures, Inserting Other Objects, Slide Show: Running a Slide Show, Transition and Slide Timings, Automating a Slide Show,

Unit VII: Using Spreadsheet Statistical functions: SUM, COUNT, AVERAGE, MAX, MIN, MEDIAN, MODE PRODUCT SQRT, STDEV.S, ABS, QUARTILE, PERCENTILE, AVERAGEIF, COUNTA, COUNTBLANK, CORREL, Logical operation IF, SUMIF, AVERAGEIF, COUNTIF,

Unit VIII: Formatting Text: Using RIGHT, LEFT, and MID functions; format text by using UPPER, LOWER, and PROPER functions; format text by using the CONCATENATE function, Generating inference from Data: Pivot Table, Creating Charts, Data Cleaning: Removing duplicate values, Text to Columns,

Suggested Readings
1. Nortorn, P. Introduction to Computers, 7ᵗʰ Edition, 2017
2 .Rajaraman, V., Fundamentals of Computers, PHI, 2014.
3. Larry E. Long and Nancy Long, Computers: Information Technology in Perspective, PHI, 2001
4. Andy Channelle, Beginning OpenOffice 3, Apress, 2009