TEACHING AND EXAMINATION SCHEME FOR
Vocational Computer Applications I Year
W.E.F. 2018 – 2019

Paper Name (Theory)	Lec.	Exam Hours	Marks of B. Sc.	
VCA-01 Computer Fundamentals & Multimedia	3	3	75	27
VCA-02 PC Software	3	3	75	27
Paper Name (Practicals)				
VCA-LAB-01 Computer Fundamentals & Multimedia	3	3	75	27
VCA-LAB-02 PC Software	3			

Note:

The question paper for Vocational Computer Applications (B. Sc.) will be divided into 3 parts

Part A:
1. 10 Question of 1 mark each – 10 marks
2. Answer should not exceed more than 20 words
3. All questions are compulsory

Part B:
1. 5 Questions of 4 marks each – 20 marks
2. Answer should not exceed more than 50 words
3. All questions are compulsory

Part C:
1. 3 Questions of 15 marks each – 45 marks. There will be an internal choice in each question.
2. Answer should not exceed 400 words
3. All questions are compulsory.

Practical exam to be conducted by one internal and one external examiner.
Duration of Practical exam is 3 hours.

VCA-01 Computer Fundamentals & Multimedia

Introduction to Computer: Definition, Characteristics, Classification of Computers, Analog Computers, Digital Computers, Hybrid Computers, Classifications of computer on the basis of size and speed, Different type of computers Generations of Computers.

Computer keyboard, Pointing Devices, Mouse, track ball, Touch pad, joysticks, Touch–Sensitive Screens, Pen–based systems, Digitizer, Data Scanning Devices, Optical Recognition Systems, Bar Code Readers, Optical Mark Readers, Optical Scanners, Drum scanners, Hand scanner, Flatbed scanner, Web Camera, game pad, Digital Camera

Hard Copy Devices: Printer, Impact Printers, Daisy Wheel, Dot Matrix Printer, Line printer, Chain printers, Comb printers, Non impact printers, DeskJet, Inkjet printers, Laser printer, Thermal transfer printer, Barcode printers

Computer display: CRT, LCD, Projection Displays, Plasma display panel, Display Standard, Introduction Memory, Classifications, Random-access memory, volatile memory, Non-volatile memory, Flash memory, Read-only memory, Secondary Memory: The Cache Memory, Auxiliary Storage Memory, Memory Hierarchy, Storage Devices, Magnetic Tape, Magnetic Disk, Floppy Disk, Hard Disks, CD, DVD, Magneto-optical

Number system, Binary, octal, hexadecimal, addition, subtraction, multiplications, Computer Code: BCD, ASCII, EBCDIC Code, Excess-3 code, Gray Code, Software: User Interface, System software, Programming software, Application software Logic Gates: Logic gates and Boolean algebra representation and simplifications by k Map,.

Computer Viruses: Introduction, History, Types of Computer Viruses, Classification of Viruses, Ways to Catch a Computer Virus, Symptoms of a Computer Virus.

Application of computer : desktop publishing, sports, design and manufacturing research and design, military, robotics, Introduction of internet, History, IP, TCP and UDP, Application protocol, World Wide web, How the Web works, Web standards, Website, Overview, Types of websites, Electronic Mail, Internet e-mail header, Saved message file extension, Messages and mailboxes. Introduction to intranet, Uses, Advantages, Disadvantages.

Multimedia: Introduction to multimedia technology, computer, communication & entertainment, frame work for multimedia system, M/M devices, presentation device and user interfaces. Digital representation of sound and transmission, video and image compression, JPEG, MPEG, DVI technology, applications of M/M.

Build HTML documents from scratch. View HTML document using a variety of Web Browsers, Organize information using Lists, Use HTML frames and tables for page layout, Connect to a variety of resources by using hypertext links, Create style sheets to format the look and feel of the pages, Understand key image theory concepts, Create new images from scans or from scratch, Optimize image sizes, Create animated gifs and transparent images.

VCA-02 PC Softwares

MS-Windows: Introduction to MS Windows, concept of GUI, window explorer ,Control panel, accessories, running applications under MS Windows.

Microsoft Word - Word Processing Basics , Features of MS Word ,Typing ,inserting , selecting and deleting Text ,Format Painter ,Find and Replace, Paragraph Attributers , Moving, Copying and Pasting Text ,Columns , Drop Caps , Change Case ,Page Setting ,Illustration, Picture, Shapes, SmartArt, Screenshot ,Create Table ,Table Design View ,Link ,Hyperlink ,Bookmark ,Table Layout ,Comments ,Header & Footers ,Design Tab ,Page Setup & Printing ,Table of Contents ,Footnotes ,Mail Merge ,Review Tab ,View Tab, Document template.

Microsoft Excel - Introducing Excel ,Recognizing Interface Features Unique to Excel , Understanding Workbook Structure ,Navigating through Workbooks ,Making Workbook Selections .The Basics Of Data -Entering Text , Entering Dates & Numbers ,Editing Cell Entries ,Copying & Moving Data, Filling a Series, Managing Workbook Structure - Modifying Workbook & Worksheet Structure, Resizing Worksheet Elements, Hiding Workbook Component ,Workbook Protection, Formatting Cells - Applying Basic Formatting ,Formatting Numbers ,Exploring the Format Cells Dialog Box ,Creating & Applying Cell Styles ,Conditional Formatting, Working With Formulas - Excel Calculations ,Entering Formulas ,Formula Auditing, The Basics Of Functions - Using Basic Functions , Controlling Calculation Options ,Linking Worksheets ,Working With Graphics -Adding Clip Art ,Add an Image From a file, Image Adjustment, Working With Charts - Creating Charts , Modifying Chart Design ,Working with Chart Layout & Format, Working With Hyperlink - Using Bookmark ,External Link ,Sorting, Filtration And Validation - Sorting Data ,Filtering Data ,Data Validation Customizing Excel - Customize Tabs, Recording a Macro, Running a Macro. Preparing Files For Distribution - Print Area, Print Titles & Sheet Options, Renaming Sheets & Adding Headers/Footers, Printing Worksheets

Microsoft PowerPoint-Exploring the PowerPoint Interface, Views, Navigation & Keyboard Shortcuts, Setting Options & Saving Files, PowerPoint Design Essentials, Setting Up a New File, Changing Backgrounds, Placeholders & Bullets, Adjusting Placeholders, Adding Headers & Footers, Saving PowerPoint Templates