### Scheme of Examination for B.Sc. Computer Applications (Vocational) Semester System (w.e.f. 2015-16)

#### Semester V

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<th>Sr. No.</th>
<th>Paper</th>
<th>Exam Duration</th>
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<td>1</td>
<td>Paper-I</td>
<td>Internal Assessment 10</td>
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<td>Desktop Publishing</td>
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<td>2</td>
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#### Semester VI

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<td>Multimedia Tools</td>
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<td>4</td>
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<td>5</td>
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<td>Practical Morning Session: (DTP)</td>
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<td>Evening Session: (Programming in C++)</td>
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Total (Semester I & II) | 40 | 260 |

Internal assessment will be based on the following criteria:

1. Two Handwritten Assignments : 5 marks
2. (1st Assignment after one month & 2nd Assignment after two months)
3. One Class Test : 2.5 marks (one period duration)
4. Attendance : 2.5 marks

**NOTE:** 1. Practical exam will be conducted annually in two sessions. However the workload will be distributed in both the semesters according to the relevant papers.
SEMESTER – V

PAPER – I  Desktop Publishing

Maximum Marks: 50
Time: 3 hours

External: 40
Internal: 10

Note: Examiner will be required to set Nine Questions in all. First Question will be compulsory, consisting of objective type/short-answer type questions covering the entire syllabus. In addition to that eight more questions will be set, two questions from each Unit. A candidate will be required to answer five questions in all, selecting one question from each unit in addition to compulsory Question No. 1. All questions will carry equal marks.

UNIT – I


UNIT – II


UNIT – III

Editing Publication: Open a publication ,Story editor, Find and change the text, Change character and Paragraph attributes ,spell checking ,Selecting text, Cut, Copy, Paste, Paste multiple, Working with columns, Control palette: Manipulating objects, formatting the text, Book, Table of Contents, Creating Index, Index entry, Show Index, Print Working with Graphics: Insert Objects, Paste Special, Linking the graphics, Link the option, Link Information, editing original ,Text wrap, Bring to Front, Send to Back, Reversing the Text.

UNIT – IV

Working with Frame: Introduction, Creating Frames, editing, Frame options, Dialog Box, Text Frame Working with colors: Introduction, Applying colors, Replacing &removing colours, Editing a color Working with Table: Setting &creating a new table, Close table, Selecting text, Cell rows & columns Typing, Editing & Formatting text in table, Cutting, Copying & Pasting Information Setting up Master Pages: Design a Grid, Guiding the Grid, Understanding Master Pages, Rulers options.

TEXT BOOKS:

- R. Shamms, Mortier &Rick Wallacl ,“PageMaker-Complete”,Techmedia
- Ramesh Bangia,“Learning PageMaker 7”,  Khanna Book Publishing Co Pvt Ltd

REFERENCE BOOKS:

- Dehe Mcclelland, “Photoshop CS2 Bible”, Oreilly Media
Note: Examiner will be required to set Nine Questions in all. First Question will be compulsory, consisting of objective type/short-answer type questions covering the entire syllabus. In addition to that eight more questions will be set, two questions from each Unit. A candidate will be required to answer five questions in all, selecting one question from each unit in addition to compulsory Question No. 1. All questions will carry equal marks.

UNIT – I
Object oriented Programming: Object-Oriented programming features and benefits. Object-Oriented features of C++, Class and Objects, Data Hiding & Encapsulation, Structures, Data members and Member functions, Scope resolution operator and its significance, Static Data Members, Static member functions, Nested and Local Class, Accessing Members of Class and Structure.

UNIT – II

UNIT – III
Manipulators, Friend Function, Friend Class, Arrays, Array of Objects, Passing and Returning Objects to Functions, String Handling in C++, Dynamic Memory Management: Pointers, new and delete Operator, Array of Pointers to Objects, this Pointer, Passing Parameters to Functions by Reference & pointers.

UNIT – IV
Polymorphism: Operators in C++, Precedence and Associativity Rules, Operator Overloading, Unary & Binary Operators Overloading, Function Overloading, Inline Functions

TEXT BOOKS:

REFERENCE BOOKS:
- Bjarne Stroustrup, “The C++ Programming Language”, Pearson
SEMESTER – VI

PAPER – I Multimedia Tools

Maximum Marks: 50
Time: 3 hours

External: 40
Internal: 10

Note: Examiner will be required to set Nine Questions in all. First Question will be compulsory, consisting of objective type/short-answer type questions covering the entire syllabus. In addition to that eight more questions will be set, two questions from each Unit. A candidate will be required to answer five questions in all, selecting one question from each unit in addition to compulsory Question No. 1. All questions will carry equal marks.

Unit I

Multimedia Introduction: Definition, Characteristics, Multimedia Classification, Multimedia elements, Multimedia devices: Multimedia Input devices, Output devices, Communication devices, memory devices
Application of multimedia: General Applications, Edutainment, application in interactive television, Multimedia applications in entertainment & performing arts, Multimedia use in museum and galleries
Concept generation of multimedia project; Process and stages of multimedia production; Multimedia production team members

Unit II

Text – Concepts of plain & formatted text, RTF & HTML texts, using common text preparation tools, Conversion to and from of various text formats, using standard software, Object Linking and Embedding concept, Basics of font design, overview of some fonts editing and designing tools, Understanding & using various text effects.

Images – importance of graphics in multimedia, Vector and Raster graphics, image capturing methods – scanner, digital camera etc., Image file formats – BMP, DIB, EPS, CIF, PEX, PIC, JPG, TGA, PNG and TIF format – their features and limitations, graphic file formats conversions, processing images with common software tools such as Photoshop.

Unit III

Sound: Sound and it Attributes, Mono V/s Stereo sound, Sound channels, Sound and its effect in multimedia, Analog V/s Digital sound, Basics of digital sounds-Sampling, Frequency, Sound Depth, Channels, Sound on PC, Sound standards on PC, Capturing and Editing sound on PC, Overview and using some sound recording, editing software. Overview of various sound file formats on PC – WAV, MP3, MP4 etc.
Overview of 2-D and 3-D animation techniques: Cell Animation, Kinematics, Morphing, RotoScoping, Antialiasing
Features of Computer Animation software- animation pro, 3D studio & Paint Shop pro animator.
Animation on the Web – features and limitations, creating simple animations for the Web using GIF Animator and Flash.
Unit IV


TEXT BOOKS:

REFERENCE BOOKS:
PAPER II- Advanced Programming Using C++

Maximum Marks: 50
Time: 3 hours

Note: Examiner will be required to set Nine Questions in all. First Question will be compulsory, consisting of objective type/short-answer type questions covering the entire syllabus. In addition to that eight more questions will be set, two questions from each Unit. A candidate will be required to answer five questions in all, selecting one question from each unit in addition to compulsory Question No. 1. All questions will carry equal marks.

UNIT – I


UNIT – II

Type Conversion: Basic Type Conversion, Conversion between objects and basic types, Conversion between objects of different classes, Inheritance: Rules of Derivations – Private, Protected and Public Derivations.

UNIT – III

Different Forms of Inheritance – Single, Multiple, Multilevel, Hierarchical and Multipath Inheritance Roles of Constructors and Destructors in Inheritance, Genericity in C++: Templates in C++, Function templates.

UNIT – IV

Class templates in C++, Exception Handling in C++: try, throw and catch, Files I/O in C++: Class Hierarchy for Files I/O, Text versus Binary Files, Opening and Closing Files, File Pointers, Operation on files.

TEXT BOOKS:
- Robert Lafore, Object Oriented Programming in C++

REFERENCE BOOKS:
- Balaguruswami, E., Object Oriented Programming In C++, Tata McGraw-Hill