SCHEME OF B.Voc. MULTIMEDIA

*Refer to Generic Components Common to all B.Voc. Courses

** Summer Industrial Training of 4-6 weeks in a relevant Industry after 4th Semester Examinations during summer break. Training report by the student to be

The Project will be 6 months duration.

B.Voc. Multimedia (Graphics & Animation) Semester-1st

Paper Title: FUNDAMENTALS OF INFORMATION TECHNOLOGY

Paper Code: GEN 102   **Credits: 6**

Job Role: Computer Oprator

B.Voc. Multimedia (Graphics & Animation) Semester-1st

Paper Title: Understanding of Multimedia & Animation

Paper Code: MGA-103   **Credits: 6**

Job Role: Multimedia Editor

Objective: The objective of the paper is to familiarize the students with animation history and multimedia tools.

Instructions:
1. The syllabus of this paper has been divided into FOUR units.
2. Examiner will set a total of **NINE** questions comprising Two questions from each unit, including Question No. 1 (compulsory) of short answer type covering the whole syllabus.
3. The students are required to attempt one question from each unit and the entire Compulsory Question No. 1.
4. All questions carry equal marks.

UNIT I

Introduction to Multimedia: Multimedia and Hypermedia, Overview of Multimedia Software Tools. Authoring Tools-Multimedia Authoring, Editing and Authoring Tools.

Graphics and Image Data Representations: Graphics/Image Data Types, File Formats-GIF, JPEG, PNG, TIFF, EXIF, PDF, WMF, BMP.

Color in Image and Video: Color Science, Color Models in Images-RGB, CMY, CMYK, Color Models in Video.

UNIT II

Fundamental Concepts in Video: Types of Video Signals, Analog Video-NTSC, PAL, SECAM, Digital Video.

Basics of Digital Audio: Digitization of Sound, MIDI, Quantization and Transmission of Audio. Multimedia Data Compression: Lossless Compression-Run Length Encoding, Variable Length Coding, Dictionary Based Coding, Arithmetic Coding. Lossy Compression Algorithms-Distortion Measures, Rate Distortion Theory, Quantization, Transform Coding, Wavelet Coding.

UNIT III

UNIT IV

History of Animation, Types of Animation, Skills for Animation Artist, Basic Principles of Animation, Animator's Drawing Tools, Rapid Sketching & Drawing, Developing Animation Character, Essentials & Qualities of Good Animation Characters, Three Dimensional Drawings of Characters.

References:

1. Ze-Nian li, Mark S. Drew,2004:*Fundamentals of Multimedia*, PHI.
2. Chris Patmore , 2009, *The Complete Animation Course* , Barons Educational Series
3. Vaughan, Tay, 2008 : *Multimedia Making it Work*, Osborne Publishers.
4. Judith Jeffcoate, 2007 : *Multimedia in Practice Technology and Applications*, PHI.

B.Voc. Multimedia (Graphics & Animation) Semester-1st

Paper Title: CorelDraw and Photoshop

Paper Code: MGA-104   **Credits: 6**

Job Role: Graphics Designer.

Objective: The objective of the paper is to familiarize the students with developments in graphics designing.

Instructions:
1. The syllabus of this paper has been divided into FOUR units.
2. Examiner will set a total of **NINE** questions comprising Two questions from each unit, including Question No. 1 (compulsory) of short answer type covering the whole syllabus.
3. The students are required to attedit-4.88211(1)1.31894( )-h57(n)1.31759(s)1.13632(( )-4.88076(c)0.727785u)1.31759(e

UNIT-IV

Creating Selections: Using the Selection Tools, Working with Lasso Tools and Quick Selection Tools, Refining and Adjusting Selection.

Applying Sharpness and Blur Adjustment: Using Sharpening Filter, Using Blur Filter, Introducing the Blur Gallery, Using the Healing Brush Tools

References :

1. Dave Karlins,1999:*Sam sTeach Yourself CorelDraw Pin 4 hours* Sams Publishing.
2. Brad Dayley & DaNae Dayley,2012:*Adobe Photoshop CS6 BIBLE* Wiley.
3. Altman, 1999 : *Mastering Corel Draw* BPB.
4. Gary David Bouton, 2012: *CorelDRAW X6 The Official Guide*, McGraw Hill Professional.
5. Romaniello, 2002 : *Photoshop 7 Savvy*, Sybex.
6. Adobe Creative Team, 2012: *Adobe Photoshop CS6 Classroom in a Book*, Adobe Press.

B.Voc. Multimedia (Graphics & Animation) Semester-1ˢᵗ

Paper Title: Practical based on Paper MGA-103 & MGA-104

Paper Code: MGA-105   **Credits: 6**

Job Role: Multimedia Editor & Graphics Designer

There will be a practical examination in this paper along with semester examination. External examiner will evaluate the skills of the students in the field of CorelDraw and Photoshop. Examiner will give on-the-spot assignments to the students. Besides this a viva voce (oral examination) of each student one by one will also be taken by the examiner for testing the knowledge of the students.

B.Voc. Multimedia (Graphics & Animation) Semester- 2nd

Paper Title: SOFT SKILLS AND PERSONALITY DEVELOPMENT

Paper Code: GEN-201   **Credits: 6**

Job Role: Creative Salesmanship

Objective: To expose the students to the concept of 'Human Development' (Personal and interpersonal) with emphasis on the latent resources that every human being possesses. To fulfill the need and importance of creating an awareness of these resources and to maximize the same to enable the students meet the challenges of the modern world.

Instructions:
1. The syllabus of this paper has been divided into FOUR units.
2. Examiner will set a total of **NINE** questions comprising Two questions from each unit, including Question No. 1 (compulsory) of short answer type covering the whole syllabus.
3. The students are required to attempt one question from each unit and the entire Compulsory Question No. 1.
4. All questions carry equal marks.

UNIT-I
Attitude, Process of attitude formation, How to build a success attitude, Spot analysis, Selfmanagement techniques, Self-image and self-esteem, Building self -confidence, Power of irresistible enthusiasm, etiquettes and manners in a group, public speaking, oral and written communication, Body language, Importance of listening and responding, tips for technical writing.

UNIT - II
Development of Communication & Co-operation. Functions of Communication, Communication Basics, Communication Networks, Tips for Effective Internal Communication. Non-verbal Communication. Ethical Communication: austerity in speech, value, ethics and communication. Communication aids. Suitable behavior towards customers, Influence in skill, Creativity in presentation & projection and Multi-cultural skills

UNIT -III
Introduction to Personality-Basic of Personality, Human growth and Behavior, Theories in Personality, Motivation; Techniques in Personality development – Self-confidence, Mnemonics, Goal setting, Time Management and effective planning, Techniques in Personality Development-Stress Management, Meditation and concentration techniques, Selfhypnotism, Self-acceptance and Self-growth.

UNIT -IV
Co-ordination while working in a team, Leadership styles, Leader & Team player, Management of conflict, Profiles of great and successful personalities, Role of career planning in personality development, How to face personal interviews and group discussions.

Books Recommended:
1. 'Personality Development' by Rajiv K. Mishra, Rupa & Co
2. 'An Approach to Communication Skills' by Indrajit B

B.Voc. Multimedia (Graphics & Animation) Semester- 2nd

Paper Title: Cinematography

Paper Code: MGA-203   **Credits: 6**

Job Role: Cameraman, Film Maker.

Objective: To expose the students to the concept of camera angles. To fulfill the need and importance of creating an awareness of these resources and to maximize the same to enable the students meet the challenges of the modern world.

Instructions:
1. The syllabus of this paper has been divided into FOUR units.
2. Examiner will set a total of **NINE** questions comprising Two questions from each unit, including Question No. 1 (compulsory) of short answer type covering the whole syllabus.
3. The students are required to attempt one question from each unit and the entire Compulsory Question No. 1.
4. All questions carry equal marks.

UNIT I

Writing with Motion: Conceptual Tools of Cinematography, Frame, Lens, Light and Color, Texture, Movement, Establishment, Point-of-View.

Shooting Methods: Cinematic, The Frame, Cinema as a Language, Shooting Methods.

Visual Language: Design Principles, Forces of Visual Organization, Rules of Composition.

Language of the Lens: Lens and the Frame, Image Control at the Lens.

UNIT III

HD Cinematography: High Def. and Standard Def. Videos, Analog & Digital Video, Types of Video Sensors, Digital Video, Shooting Formats, Digital Compression, Monitoring on the Set, Video Signal, Setting Up a Color Monitor, Camera with Balance, Timecode & Edgecode, Compression & Codecs.

Exposure: Light as Energy, Exposure, ISO, and Lighting Relationships, Light & Film, Densitometry, Brightness Perception, Contrast, Zone System, Gray Scale, Exposure & Camera.

Camera Movement: Basic Techniques, Moves, Moving Shots, Camera Mounting, Crab Dolly, Cranes, Car Shots, Ariel Shots, Motion Control.

UNIT IV

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B.Voc. Multimedia (Graphics & Animation) Semester- 2nd

Paper Title: Video and Audio Editing

Paper Code: MGA-204   **Credits: 6**

Job Role: Video & Audio Editor

Objective: To expose the students to the concept of video & audio editor. To fulfill the need and importance of

B.Voc. Multimedia (Graphics & Animation) Semester- 3rd

Paper Title: Internet Technology& Web Designing

Paper Code: GEN 302   **Credits: 6**

Job Role: Web designer.

Objective: To expose the students to the concept of web designer. To fulfill the need and importance of creating an awareness of these resources and to maximize the same to enable the students meet the challenges of the modern world.

Instructions:
1. The syllabus of this paper has been divided into FOUR units.
2. Examiner will set a total of **NINE** questions comprising Two questions from each unit, including Question No. 1 (compulsory) of short answer type covering the whole syllabus.
3. The students are required to attempt one question from each unit and the entire Compulsory Question No. 1.
4. All questions carry equal marks.

UNIT-I

Introduction to Internet: Internet Overview, Evolution & History of Internet, Growth of Internet, Internet Services, Anatomy of Internet, Internet Applications, Impact of Internet.

Internet Technology and Protocol: OSI Reference Model, TCP/IP Reference Model, Data Transmission, Switching, Routers and Gateways, Network Protocols, Internet Addressing.

Internet Connectivity: Different Types of Connections, Hardware and Software requirements of Internet, Levels of Internet Connectivity, Internet Service provider.

UNIT-II

Computer Network: Network Definition, Common Terminology- LAN, WAN, Network Components, Network Topologies, Types of Network Architecture, Different Medium of Communication, Network Security.

WWW and Web browser: WWW, Evolution of Web, Basic Elements of WWW, Web Browsers and Search Engines.Electronic Mail: Email Basics, Concepts of Email Server, Structure of Email Message, Working of Email System, Email Security.

UNIT-III

Web Publishing and Browsing: Overview, SGML, Web Hosting, URL, CGL, Components of web Publishing, Web Page Design consideration and Principles.

HTML Programming Basics: HTML Page Structure, HTML Lists, HTML Tables, HTML Links, HTML Forms, HTML Frames.

UNIT-IV

Internet Tools and Multimedia: Current Trends on Internet, Interactivity Tools, Multimedia and Animation.

Remote Login: introduction to Remote login, Introduction to Telnet, File Transfer Protocol.

Internet and Web Security: Overview of Internet Security, Email Threats, Web Security and Privacy Concepts, Firewall, Cryptography, Digital Signatures, Authentication and Access Control, Virus, Internet Security and Management Concepts.

References:

1. ISRD Group, 2011: *Internet Technology and Web Design*, Tata McGraw-Hill.
2. Tom Craig, 2003: *Internet Technology People Process*, Black Rabbit Books.
3. Valerie Bodden, 2008: *Internet* The Creative Company.
4. Ewaryst Tkacz, Adrian Kapczynski, 2009: *Internet Technical Development and Applications* Springers Publications.

UNIT-IV

Distributing Flash Movies: Testing Flash Movies, Publishing your Flash Movies, Selecting Formats, Integrating Flash Content with Web Pages, Writing Markup for Flash Movies, Detecting the Flash Player. Using The Flash Player: Using the Stand-Alone Flash Player, Using the Flash Player Plug In for Web Browsers, Using the Flash Player Setting.

References:

1.

B.Voc. Multimedia (Graphics & Animation) Semester- 3rd

Paper Title: Dreamweaver

Paper Code: MGA-304   **Credits: 6**

Job Role: Web Programmer.

Objective: To expose the students to the concept of HTML lanuage editor. To fulfill the need and importance of creating an awareness of these resources and to maximize the same to enable the students meet the challenges of the modern world.

Instructions:
1. The syllabus of this paper has been divided into FOUR units.
2. Examiner will set a total of **NINE** questions comprising Two questions from each unit, including Question No. 1 (compulsory) of short answer type covering the whole syllabus.
3. The students are required to attempt one question from each unit and the entire Compulsory Question No. 1.
4. All questions carry equal marks.

UNIT-I

Introduction: Explore the Dreamweaver Workspace, Features of Dreamweaver, Website Development

Process, Adding a Folder to the Website, Creating the Homepage, Adding Pages to a Website,

Developing a Webpage, Creating Head Content and Set Page Properties, Create, Import and Format Text,

Adding Links to Webpages, Using the History Panel, Editing the Code. Adding Image, Enhancing the

Image and Use Alternate Text, Creating a Website Color Palette.

UNIT-II

Cascading Style Sheets: Introduction, Types, CSS Styles, Panel, Advantages & Disadvantages of CSS,

Adding Rules, Creating Pages Using CSS Layouts.

Links: External& Internal Links, Create, Modify and Copy Spry Menu Bar, Create an Image Map, Tables,

Creating a Table, Properties, Merging Cells, Insert &Align Images in a Table, Insert Text & Format Cell

Content.

UNIT-III

Forms: Plan and Create Forms, Edit & Format the Forms, Form Objects, Test & Process Forms.

Positioning Objects with AP Div:Insert an AP Div, Position and Size, Adding Content to an AP Div,

Adding Images, AP Div Properties, Using AP Elements Panel, Cloak Files, Check Files Out and In.

UNIT-IV

Media and Interactivity:Adding &Modifying Flash Objects, Inserting Rollover Images, Behaviors Panel, Adding Video and Sounds, Creating Pages Using Templates, Editable Regions, Optional Regions.

References:

1. Sherry Bishop, 2012:

B.Voc. Multimedia (Graphics & Animation) Semester- 3rd

Paper Title: Practical Based on MGA-303 & MGA-304

Paper Code: MGA-305   **Credits: 6**

Job Role: 2D Animator, Web designer / Programmer.

There will be a practical examination in this paper along w

B.Voc. Multimedia (Graphics & Animation) Semester- 3rd

Paper Title: Practical Based on MGA-303 & MGA-304

Paper Code: MGA-305   **Credits: 6**

Job Role: 2D Animator, Web designer / Programmer.

There will be a practical examination in this paper along w

B.Voc. Multimedia (Graphics & Animation) Semester- 4th

Paper Title: ENVIRONMENTAL STUDIES

Paper Code: GEN-401   **Credi-6.12 Td rs: 6**

References:

1. Tony White, 2006: *Animation From Pencil to Pixels*, Focal Press.

2. Isaac V. Kerlow :The Art of 3D Computer Animation and Effects, John Wiley & Sons.

3. Mary Murphy, 2008 :Beginner's Guide to Animation: Everything you need to know to get started, Watson-Guptill Publications.

4. Yueting Zhuang, Yunhe Pan, Jun Xiao, 2008:

B.Voc. Multimedia (Graphics & Animation) Semester- 4th

Paper Title: 3ds Max: Modeling

Paper Code: MGA-403   **Credits: 6**

Job Role: 3D Modler.

Objective: To expose the students to the concept of 3D Modler. To fulfill the need and importance of creating an awareness of these resources and to maximize the same to enable the students meet the challenges of the modern world.

Instructions:
1. The syllabus of this paper has been divided into FOUR units.
2. Examiner will set a total of **NINE** questions comprising Two questions from each unit, including Question No. 1 (compulsory) of short answer type covering the whole syllabus.
3. The students are required to attempt one question from each unit and the entire Compulsory Question No. 1.
4. All questions carry equal marks.

UNIT I

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UNIT IV

Subobjects & Modifiers: Model Types, Normals, Subobjects, Modifiers, Modifiers Stack.
2D Splines & Shapes: Drawing in 2D, Editing in Splines.
Modelling with Polygons: Poly Objects, Creating Editable Poly Objects.
Graphite Modelling Tools, Freeform Tools, Selection Tools, Object Paint Tools.
Compound Objects: Types, Morphing Objects, Terrain Objects, Blob Mesh Objects, ProBoolean &
Procutter Objects.

References:

1. Kelly L., Murdock, 2013 : *Autodesk   Ds Max   4 Bible*, Wiley.
2. Dariush Derakhshani, Randi L. Derakhshani, 2011: *Introducing   ds Max P D for Beginners* Wiley India.
3. Kelly L. Murdock, 2013:*Mastering Autodesk   ds Max   *, Wiley India.
4. Markus Kuhlo, 2013: *Architectural Rendering with   ds Max and V Ray*, Focal Press.
5. Todd Daniele, 2009: *Poly modeling with   ds Max Thinking Outside of the Box Focal Press*

B.Voc. Multimedia (Graphics & Animation) Semester- 4th

Paper Title: 3ds Max: Texturing, Lighting & Rendering

Paper Code: MGA-404   **Credits: 6**

Job Role: 3D Virtual Envirnmental Creator

Objective: To expose the students to the concept of 3D Virtual Envirnmental Creator. To fulfill the need and importance of creating an awareness of these resources and to maximize the same to enable the students meet the challenges of the modern world.

Instructions:
1. The syllabus of this paper has been divided into FOUR units.
2. Examiner will set a total of **NINE** questions comprising Two questions from each unit, including Question No. 1 (compulsory) of short answer type covering the whole syllabus.
3. The students are required to attempt one question from each unit and the entire Compulsory Question No. 1.
4. All questions carry equal marks.

UNIT-I

References:

1. Kelly L., Murdock, 2013 : *Autodesk   Ds Max   4 Bible*, Wiley.
2. Dariush Derakhshani, Randi L. Derakhshani, 2011: *Introducing   ds Max   P   D for Beginners* Wiley India.
3. Kelly L. Murdock, 2013:*Mastering Autodesk   ds Max   *, Wiley India.
4. Markus Kuhlo, 2013: *Architectural Rendering with   ds Max and V Ray*, Focal Press.
5. Todd Daniele, 2009: *Poly modeling with   ds Max Thinking Outside of the Box Focal Press*

B.Voc. Multimedia (Graphics & Animation) Semester- 4th

Paper Title: Practical Based on Paper MGA-403 & MGA-404

Paper Code: MGA-405   **Credits: 6**

Job Role: 3D Virtual Environmental Creator.

There will be a practical examination in this paper along with semester examination. External examiner will evaluate the skills of the students in the field of animation using 3ds Max. Examiner will give on-the-spot assignments to the students. Besides this a viva voce (oral

B.Voc. Multimedia (Graphics & Animation) Semester- 5th

Paper Title: CRITICAL THINKING AND ELEMENTARY SATISTICS

Paper Code: GEN-501   **Credits: 6**

Job Role: Satistical Analyst

Objective: The objective of the paper is to provide knowledge to student about basics of statistics and to inculcate the habit of critical thinking.

Instructions:
1. The syllabus of this paper has been divided into FOUR units.
2. Examiner will set a total of **NINE** questions comprising Two questions from each unit, including Question No. 1 (compulsory) of short answer type covering the whole syllabus.
3. The students are required to attempt one question from each unit and the entire Compulsory Question No. 1.
4. All questions carry equal marks.

Unit I
Introduction: Statistics as a Subject ; Statistical Data: Meaning and Types , Collection and Rounding of Data, Classification and Presentation of Data.

Unit II
Analysis of Univariate Data: Construction of a Frequency Distribution; Concept of Central Tendency, mean, median and mode.

Unit III
Dispersion and Their Measures; Time Series: Meaning, Components, Models, Fitting Linear and Quadratic Trend

Unit IV
Index Number: Meaning, Types, and Uses: Methods of Constructing Price and Quantity Indices (Simple and Aggregate).

Books Recommended:
1. Aczel, Amir D.: Complete Business Statistics, Irwin.
2. Chou-YaLun: Statistical Analysis, Holt, Rinchart and Winslon.
3. Levin, Richard I. & David S Rubin: Statistics for Management, Prentice Hall of India, Delhi.

B.Voc. Multimedia (Graphics & Animation) Semester- 5th

Paper Title: Cyber Laws

Paper Code: MGA-502   **Credits: 6**

Job Role: Cyber Crime Controller.

Objective: The subject and the course content will help the student to understand, explore and acquire a critical understanding of Cyber Laws.

Instructions:
1. The syllabus of this paper has been divided into FOUR units.
2. Examiner will set a total of **NINE** questions comprising Two questions from each unit, including Question No. 1 (compulsory) of short answer type covering the whole syllabus.
3. The students are required to attempt one question from each unit and the entire Compulsory Question No. 1.
4. All questions carry equal marks.

UNIT I

Introduction to Cyber Laws – In Indian Context: - Information Technology Act 2000, Amendments made in the Indian ITA 2000, Positive Aspects of the ITA 2000, The Weak Areas of the ITA 2000, Challenges to Indian Law and Cybercrime, Scenario in India, Consequences of Not Addressing the Weakness in Information Technology Act Amendments to the Indian ITA 2008, Impact of IT Act Amendments Impact Information Technology Organizations, Cybercrime and Punishment.

UNIT II

Internet and the Protection of Software Copyright: - Open Source, Reverse Engineering Trademark Issues in Cyber Space: - Domain Name, the ICANN Uniform Domain, Name Dispute Resolution Policy

UNIT III

IPR in Cyber Space: - Patents in Digital Technology, Copy Rights in Digital Space, WIPO Internet Treaties,

B.Voc. Multimedia (Graphics & Animation) Semester- 5th

Paper Title: 3D Max Animation (Practical)

Paper Code: MGA-503   **Credits: 6**

Job Role: 3D Animator.

Objective:

Reference Books

1. Michael E. Mortenson 3D Modeling, Animation, and Rendering Create space
2. Boris Kulagin 3ds Max 8 from Modeling to Animation Bpb
3. Michael G. 3D Modeling and Animation Igi Publishing

B.Voc. Multimedia (Graphics & Animation) Semester- 5th

Paper Title: PRE PRODUCTION (THEORY)

Paper Code: MGA-505   **Credits: 6**

Job Role: Pre-production refers to the tasks that must be completed or executed before filming or shooting begins. This includes tasks such as hiring actors or models, building sets, budgeting, planning, scheduling, renting equipment and tests, to name a few of the many pre-production tasks.

Objective: The goal of pre-production is to develop an efficient structure for your project on which the final animation will be produced. In pre-production, we identify potential difficulties in production and work with you to minimize or eliminate them.

B.Voc. Multimedia (Graphics & Animation) Semester- 6th

Paper Title: FINAL PROJECT

Paper Code: MGA-603   **Credits: 6**

Job Role: Graphics Designer, Web Designer, Video / Audio Editing, VFX Compositor, 2D Animator, 3D Modular.

Specialization (Choose any one Project)

Final Project: Graphics Designing / Web Designing / 2D Animation / 3D Animation / Texturing, Shading & Lighting, Rendering / Visual Effects / Digital Compositing / Motion Graphics / Video Editing.