

233-Multimedia Technology

UNIT – I**No. of Hours: 10****Chapter/Book Reference: TB1 [Chapter 1];
TB3 [Chapters 1-4, 7, 8]**

Introductory Concepts: Multimedia – Definitions, CD-ROM Technology
Multimedia Highway, Applications of Multimedia, Introduction to Multimedia Projects –
The Stages of Project, Requirements to make Good Multimedia, Multimedia Skills and
Training, Introduction to Virtual Reality, Challenges in Multimedia Technologies.

Multimedia-Hardware and Software: Multimedia Hardware – Macintosh and Windows
Production Platforms, Memory and Storage Devices, – Basic Tools,
Making Instant Multimedia.

Multimedia Building Blocks: Text, Sound, Images, Animation, Multimedia Software
Schemes, Digitization of Audio and Video objects.

Assembling and Delivering a Project: Planning and Costing, Designing and Video, Image Color
Content and Talent, Delivering.

and Producing,

UNIT – II**No. of Hours: 10****Chapter/Book Reference: TB1 [Chapter 7]; TB3 [Chapters 5, 6]**

Animation: Introduction, Basic Animation Techniques, Motion Graphics-2D & 3D
Animation - Cell Animation, Computer Animation, Tweening & Morphing, Dynamics,
Kinematics, Reverse Kinematics.

Video and Animation: Video Basics, How Video works, Analog Video, Digital Video, Video
Recording and Tape Formats, Shooting and Editing Videos.

Exposure of Multimedia Tools: Authoring Tools, Modelling, Rendering, Texture Shading,
Different File Formats.

UNIT – III**No. of Hours: 10****Chapter/Book Reference: TB2 [Chapters 3, 4]; TB3 [Chapter 4]**

Compression Fundamentals: Need for Compression, Lossless and Lossy Compression,
Taxonomy of Compression Algorithms, Basics of Information Theory.

Text Compression: Huffman Coding, Dynamic Huffman Coding, Arithmetic Technique.

Entropy Encoding: Run Length Coding, Lempel-Ziv-Welch (LZW) Algorithm.

Source Coding: Transform Coding- JPEG, MPEG, Audio Compression-MP3, Statistical
Coding-Pattern Substitution.

UNIT – IV**No. of Hours: 10****Chapter/Book Reference: TB2 [Chapters 1,2,5,7,8]**

Multimedia Communication and Applications: Multimedia Information Representation,
Multimedia Networks, Integrated Services, RSVP- Differentiated Services, Multimedia on
4G/5G Networks, Standards for Multimedia Communications - Interpersonal
Communication, Multimedia Conferencing, Interactive Application over Internet,
Entertainment Applications and Interactive Television.

Multimedia and Internet: IP Datagram, Fragmentation and Reassembly, QoS Support,
IPv4/IPv6 Interoperability, Designing for WWW- Audio, Video.

Digital Communication: Transmission Mode, Asynchronous, Synchronous and