

3BCA5(A)-MULTIMEDIA TOOLS AND APPLICATIONS

UNIT-I

Multimedia: Needs and areas of use, Development platforms for multimedia - DOS, Windows, Linux. Identifying Multimedia elements - Text, Images, Sound, Animation and Video, Making simple multimedia with PowerPoint.

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. various attributes of Images - size, color, depth etc, Various Image file format - 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, Paint Shop pro, Corel draw etc..

UNIT-II

Sound: Sound and its 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, Ogg Vorbise etc.

UNIT-II

Animation: Basics of animation, Principle and use of animation in multimedia, Effect of resolutions, pixel depth, Images size on quality and storage. Overview of 2-D and 3-D animation techniques and 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-III

Video: Basics of Video - Analog and Digital Video, How to use video on PC. Introduction to graphics accelerator cards, DirectX

Introduction to AV/DV and IEEE1394 cards , Digitization of analog video to digital video, Interlacing and non-interlacing, Brief note on various video standards - NTSC, PAL, SECAM, HDTV, Introduction to video capturing Media & instrument - Videodisk, DVCAM, Camcorder, Introduction to digital video compression techniques and various file formats - AVI, MPEG, MOV, Real Video. Brief Introduction to video editing and movie making tools - Quick time, video for windows & Adobe premier.

UNIT-IV

Authoring tools for CD Based Multimedia: Type of multimedia authoring tools, key factors of selecting CD based multimedia authoring tools, Planning and distribution of a multimedia project. Multimedia development team & skills requirement, Stages in designing & producing multimedia products for CD, Testing of product, distribution of multimedia product, various formats of CD's and DVD's.

UNIT-V

Multimedia on the Web: Bandwidth relationship, broadband technologies, Text in the web - Dynamic and embedded font technology, Audio on the Web - Real Audio and MP3/MP4, Audio support in HTML, Graphics - HTML safe color palate, Interlaced V/s Non interlaced model, Graphics support in HTML, Image Map, Video on the Web - Streaming video, Real Video, MPEG and SMIL, Virtual Reality on the Web.

Text & Reference Books :

- **MULTIMEDIA: MAKING IT WORK (4th Edition) - by Tay Vaughan, Tata Mcgraw Hills.**
- **MULTIMEDIA IN ACTION - James E Shuman - Vikas Publishing House.**
- **MULTIMEDI BASICS - Volume - 1 Technology, Andreas Holzinger, Firewall Media(Laxmi Publications Pvt. Ltd) New Delhi.**