Konkan Gyanpeeth Karjat College of Arts ,Commerce & Science

CLASS: B. Sc (Information technology)		**Semester – IV**	
COURSE: Multimedia			
Periods per week **1 Period is 50 minutes**	**Lecture**	**5**	
	TW/Tutorial/Practical	**3**	
		Hours	**Marks**
Evaluation System	**Theory Examination**	**3**	**100**
	TW/Tutorial/Practical	**--**	**50**

Unit-I	**Introduction:** What is multimedia? Defining the scope of multimedia. Applications of multimedia, hardware and software requirements, multimedia database.
Unit-II	**Digital representation:** Introduction, Analog representation, waves, digital representation, need for digital representation, A to D conversion, D to A conversion, relation between sampling rate and bit depth, Quantization error, Fourier representation, pulse modulation. Importance and drawback of digital representation.
Unit-III	**Text and Image:** Introduction, Types of text, Font, insertion, compression,File formats. Types of images, colour models, Basic steps for image processing, principle and working of scanner and digital camera, Gamma and gamma correction.
Unit-IV	**Audio and Video technology:** Fundamental characteristics of sound, psycho-

	acoustics, Raster scanning principles, sensors for TV cameras, color fundamentals, additive and subtractive color mixing, Liquid crystal display (LCD), Plasma Display Panel (PDP), file formats
Unit-V	**Compression and coding**: What is compression? Need for compression, Types of compression- basic compression techniques-run length, Huffman's coding, JPEG, zip coding. Overview of Image and Video compression techniques.
Unit-VI	**Multimedia presentation and authoring:** Overview, multimedia authoring metaphor, multimedia production, presentation and automatic authoring, Design paradigms and user interface, overview of tools like adobe premier, director, flash and dreamweaver. Barriers to wide spread use.

Books:

Principles of Multimedia by Ranjan Parekh. Tata McGraw-Hill

Reference:

Multimedia Systems Design by Prabhat K. Andleigh and Kiran Thakrar-PHI publication

Multimedia systems by John F. Koegal Buford-Pearson Education.

Fundamentals of multimedia by Ze-Nian Li and MS Drew. PHI EEE edition.

Term Work:

Assignments: ***Should contain at least 6 assignments (one per unit) covering the Syllabus.***

Tutorial: At least **t**hree tutorials based on above syllabus must be conducted.

Mini Project: Develop a multimedia application