Reg. No. : | | | | | | | | | | | | |

Question Paper Code:U8502

B.E./B.Tech. DEGREE EXAMINATION, APRIL / MAY 2025

Professional Elective

21ITV502 MULTIMEDIA AND ANIMATION

(Regulations 2021)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1.	How does multimedia storage differ from traditional data storage?	CO1 - U
2.	State the concept of multimedia databases	CO1 - U
3.	How do video file formats differ from audio file formats?	CO1 - U
4.	What is the role of color in images and videos?	CO1 - U
5.	What are cross-platform authoring tools, and why are they important for multimedia projects?	CO1 - U
6.	How do editing tools support multimedia content creation?	CO1 - U
7.	How does 2D animation differ from 3D animation in terms of creation and presentation?	CO1 - U
8.	How does morphing differ from traditional animation techniques?	CO1 - U
9.	What is content-based retrieval?	CO1 - U
10.	What is multimedia cloud computing?	CO1 - U

PART B - (5 x 16 = 80 Marks)

11.	(a)	Explain the challenges related to multimedia processing, such as video and audio encoding, compression, and rendering. How can these challenges be addressed to ensure high-quality multimedia content delivery?	CO1- U	(16)

Or

	(b)	Describe the role of multimedia hardware in the creation, storage, and presentation of multimedia content. Provide examples of hardware components used in multimedia systems (e.g., cameras, displays, speakers, etc.).	CO1- U	(16)
12.	(a)	Analyze digital video file formats and show how they differ in terms of compression, resolution, and quality. Compare formats such as MP4, AVI, MOV, and MKV in terms of compatibility and performance in multimedia applications.	CO3- Ana	(16)
		Or		
	(b)	Analyze the various color models used in digital image and video processing also compare RGB, CMYK, and HSV models, and describe the scenarios where each model is most appropriate.	CO3- Ana	(16)
13.	(a)	Discuss the different types of multimedia editing tools available for content creation. How do editing tools for images, audio, and video differ, and what unique features do they offer to users?	CO1- U	(16)
		Or		
	(b)	Describe the role of 3D modeling and animation tools in multimedia development. How do these tools help in creating 3D environments, characters, and simulations?	CO1- U	(16)
14.	(a)	Explain the concept of inverse kinematics in animation. How does inverse kinematics simplify the process of animating complex character movements, especially in 3D animation?	CO1- U	(16)
		Or		
	(b)	Discuss the importance of fluid simulation in animation. How do animators use fluid simulation to create realistic liquid movements (such as water, fire, or smoke), and what are some challenges associated with this technique?	CO1- U	(16)
15.	(a)	Explain the concept of multimedia streaming cloud services. How do these services support on-demand access to multimedia content such as videos, music, and live broadcasts? What are the technical challenges in delivering high-quality streaming content at scale?	CO1- U	(16)
		Or		

(b) Explain multimedia ontology and its role in multimedia content management. How can multimedia ontology be used to categorize and organize multimedia data for effective search and retrieval? Discuss its impact on improving the user experience in multimedia applications. CO1- U (16)