

SRM VALLIAMMAI ENGINEERING COLLEGE

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DEPARTMENT OF INFORMATION TECHNOLOGY

QUESTION BANK



VII SEMESTER

OIT101 MULTIMEDIA TECHNOLOGIES

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Prepared by

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Department of Information Technology
Question Bank



SUBJECT : OIT101 MULTIMEDIA TECHNOLOGIES

SEM / YEAR : VII / IV

UNIT I – INTRODUCTION TO MULTIMEDIA			
Multimedia – Multimedia System Architecture – Evolving Technologies for Multimedia – Components of Multimedia – Multimedia Hardware and Software – Web and Internet Multimedia Applications – Data Representation – Text Representation – Image Representation – Audio Representation – Video Representation – Transition from Conventional Media to Digital Media.			
PART-A			
Q.No	Question	BTL	Competence
1	Define multimedia.	BTL1	Remembering
2	List the components of multimedia.	BTL1	Remembering
3	Define multimedia hardware.	BTL1	Remembering
4	What is data representation?	BTL1	Remembering
5	Name any two image representation formats.	BTL1	Remembering
6	List any two video file formats.	BTL1	Remembering
7	Give examples of web multimedia applications.	BTL1	Remembering
8	Define digital media.	BTL1	Remembering
9	Identify any two multimedia software tools.	BTL1	Remembering
10	Define multimedia system architecture.	BTL1	Remembering
11	Specify any two audio formats.	BTL1	Remembering
12	Name any two multimedia hardware devices.	BTL1	Remembering
13	State the purpose of multimedia system architecture.	BTL2	Understanding
14	Mention the significance of multimedia software.	BTL2	Understanding
15	State the role of text representation in multimedia systems.	BTL2	Understanding
16	Give the importance of audio representation in multimedia systems.	BTL2	Understanding
17	State the role of Internet multimedia applications.	BTL2	Understanding
18	Mention the importance of multimedia in communication.	BTL2	Understanding
19	Classify multimedia components.	BTL2	Understanding
20	Relate image representation to multimedia applications.	BTL2	Understanding
21	State the purpose of video representation in multimedia systems.	BTL2	Understanding
22	Mention the advantages of digital media.	BTL2	Understanding
23	State any two characteristics of multimedia.	BTL2	Understanding
24	Give the significance of multimedia technology in modern applications.	BTL2	Understanding

	PART-B			
1	(i) Demonstrate the architecture of a multimedia system with a neat diagram. (ii) Develop a multimedia model using multimedia components.	(8) (8)	BTL3	Applying
2	(i) Apply multimedia concepts in communication systems. (ii) Construct a multimedia framework for information sharing.	(8) (8)	BTL3	Applying
3	Develop a multimedia solution for an e-learning application using suitable multimedia elements.	(16)	BTL3	Applying
4	Construct a multimedia framework for web-based communication.	(16)	BTL3	Applying
5	Implement multimedia technologies in a healthcare information system.	(16)	BTL3	Applying
6	(i) Design a multimedia presentation incorporating text and image elements. (ii) Design a multimedia presentation incorporating audio and video elements.	(8) (8)	BTL3	Applying
7	Apply multimedia technologies in education and training environments.	(16)	BTL3	Applying
8	Develop an interactive multimedia application using suitable multimedia components.	(16)	BTL3	Applying
9	(i) Analyze the architecture of a multimedia system with a neat diagram. (ii) Examine the interaction among multimedia system components.	(8) (8)	BTL4	Analyzing
10	Analyze the role of multimedia hardware and software in multimedia system development.	(16)	BTL4	Analyzing
11	Examine the evolution of multimedia technologies and their impact on communication systems.	(16)	BTL4	Analyzing
12	Analyze the representation of text, image, audio and video in multimedia systems.	(16)	BTL4	Analyzing
13	(i) Investigate multimedia data representation techniques. (ii) Analyze the challenges involved in multimedia data management.	(8) (8)	BTL4	Analyzing
14	Analyze the significance of web and Internet multimedia applications in information sharing and communication.	(16)	BTL4	Analyzing
15	Examine the transition from conventional media to digital media.	(16)	BTL4	Analyzing
16	Analyze the advantages and limitations of digital media in multimedia applications.	(16)	BTL4	Analyzing
17	Investigate the challenges involved in multimedia data representation, storage and management.	(16)	BTL4	Analyzing

UNIT II – MULTIMEDIA SYSTEM DESIGN & FILE HANDLING

Defining objects for multimedia systems – Multimedia data interface standards – Multimedia databases – Compression and decompression – Data and file format standards – Multimedia I/O technologies – Digital voice and audio – Video image and animation – Full motion video – Storage and retrieval technologies.

PART-A

Q.No	Question	BTL	Competence
1	Define multimedia object.	BTL1	Remembering
2	List the multimedia data interface standards.	BTL1	Remembering
3	Define multimedia database.	BTL1	Remembering
4	What is compression?	BTL1	Remembering
5	Define decompression.	BTL1	Remembering
6	Name any two multimedia file formats.	BTL1	Remembering
7	Define multimedia I/O technology.	BTL1	Remembering
8	What is digital voice?	BTL1	Remembering
9	Define digital audio.	BTL1	Remembering
10	What is full-motion video?	BTL1	Remembering
11	Identify any two multimedia storage devices.	BTL1	Remembering
12	Specify any two multimedia retrieval technologies.	BTL1	Remembering
13	State the purpose of defining objects in multimedia systems.	BTL2	Understanding
14	Mention the significance of multimedia data interface standards.	BTL2	Understanding
15	State the role of multimedia databases in multimedia systems.	BTL2	Understanding
16	Give the importance of compression in multimedia applications.	BTL2	Understanding
17	State the role of decompression in multimedia systems.	BTL2	Understanding
18	Classify multimedia file format standards.	BTL2	Understanding
19	Mention the importance of multimedia I/O technologies.	BTL2	Understanding
20	Relate digital voice and audio to multimedia applications.	BTL2	Understanding
21	State the purpose of video image and animation in multimedia systems.	BTL2	Understanding
22	Give the significance of full-motion video in multimedia applications.	BTL2	Understanding
23	Mention the advantages of multimedia storage technologies.	BTL2	Understanding
24	State the role of multimedia retrieval technologies.	BTL2	Understanding

PART-B

1	Develop a multimedia database structure for storing multimedia information.	(16)	BTL3	Applying
2	(i) Demonstrate the process of defining objects in a multimedia system. (ii) Apply multimedia object concepts in multimedia application	(8) (8)	BTL3	Applying

	development.			
3	(i) Apply multimedia data interface standards in multimedia communication. (ii) Construct a multimedia data exchange model using suitable standards.	(8) (8)	BTL3	Applying
4	Apply compression and decompression techniques in multimedia file handling.	(16)	BTL3	Applying
5	Implement multimedia file format standards in multimedia applications.	(16)	BTL3	Applying
6	Develop a multimedia solution incorporating video image and animation technologies.	(16)	BTL3	Applying
7	Implement storage and retrieval technologies in a multimedia information system.	(16)	BTL3	Applying
8	Implement digital voice and digital audio technologies in multimedia applications.	(16)	BTL3	Applying
9	Analyze multimedia database architecture and its role in multimedia systems.	(16)	BTL4	Analyzing
10	(i) Analyze multimedia object representation in multimedia systems. (ii) Examine the role of multimedia objects in multimedia applications.	(10) (6)	BTL4	Analyzing
11	Examine the effectiveness of compression and decompression techniques in multimedia applications.	(16)	BTL4	Analyzing
12	Analyze multimedia file format standards and their applications.	(16)	BTL4	Analyzing
13	(i) Investigate multimedia I/O technologies used in multimedia systems. (ii) Analyze the interaction between multimedia devices and I/O technologies.	(8) (8)	BTL4	Analyzing
14	Analyze the role of digital voice and digital audio in multimedia communication.	(16)	BTL4	Analyzing
15	Examine the use of video image and animation technologies in multimedia applications.	(16)	BTL4	Analyzing
16	Analyze storage technologies and retrieval mechanisms used in multimedia systems.	(16)	BTL4	Analyzing
17	Investigate the challenges involved in multimedia storage, retrieval and file management.	(16)	BTL4	Analyzing

UNIT III – HYPERMEDIA

Multimedia authoring and user interface – Hypermedia messaging – Mobile messaging – Hypermedia message components – Creating hypermedia messages – Integrated multimedia message standards – Integrated document management – Distributed multimedia systems.
Case Study: Blender graphics and fundamentals – Drawing basic shapes – Modelling – Shading and textures.

PART-A				
Q.No	Question	BTL	Competence	
1	Define hypermedia.	BTL1	Remembering	
2	List the components of a hypermedia message.	BTL1	Remembering	
3	Define multimedia authoring.	BTL1	Remembering	
4	What is user interface?	BTL1	Remembering	
5	Name any two multimedia authoring tools.	BTL1	Remembering	
6	Define mobile messaging.	BTL1	Remembering	
7	What is hypermedia messaging?	BTL1	Remembering	
8	Define integrated multimedia message standards.	BTL1	Remembering	
9	Identify any two document management systems.	BTL1	Remembering	
10	What is distributed multimedia system?	BTL1	Remembering	
11	Define modelling in Blender.	BTL1	Remembering	
12	Specify any two shading techniques used in Blender.	BTL1	Remembering	
13	State the purpose of multimedia authoring.	BTL2	Understanding	
14	Mention the significance of user interface in multimedia systems.	BTL2	Understanding	
15	State the role of hypermedia messaging in communication.	BTL2	Understanding	
16	Give the importance of mobile messaging in multimedia applications.	BTL2	Understanding	
17	State the role of hypermedia message components.	BTL2	Understanding	
18	Mention the significance of integrated multimedia message standards.	BTL2	Understanding	
19	Classify document management techniques used in multimedia systems.	BTL2	Understanding	
20	Relate distributed multimedia systems to multimedia communication.	BTL2	Understanding	
21	State the purpose of drawing basic shapes in Blender.	BTL2	Understanding	
22	Give the significance of modelling in multimedia content creation.	BTL2	Understanding	
23	Mention the advantages of shading and textures in graphics design.	BTL2	Understanding	
24	State the role of Blender graphics in multimedia development.	BTL2	Understanding	
PART-B				
1	(i) Develop a hypermedia message using suitable multimedia components.	(8)	BTL3	Applying
	(ii) Construct a multimedia authoring model for interactive content creation.	(8)		
2	Apply multimedia authoring tools in the development of multimedia applications.	(16)	BTL3	Applying

3	Develop a user interface for a multimedia application using appropriate design principles.	(16)	BTL3	Applying
4	Implement mobile messaging technologies in multimedia communication systems.	(16)	BTL3	Applying
5	(i) Construct a hypermedia messaging framework for multimedia communication. (ii) Develop integrated multimedia messages using suitable standards.	(8) (8)	BTL3	Applying
6	Develop an integrated document management system for multimedia information.	(16)	BTL3	Applying
7	Implement distributed multimedia systems for multimedia communication applications.	(16)	BTL3	Applying
8	Design multimedia content using Blender graphics tools.	(16)	BTL3	Applying
9	Analyze the role of multimedia authoring in multimedia application development.	(16)	BTL4	Analyzing
10	Examine the significance of user interface design in multimedia systems.	(16)	BTL4	Analyzing
11	Analyze hypermedia messaging and its role in multimedia communication.	(16)	BTL4	Analyzing
12	Investigate integrated multimedia message standards used in multimedia systems.	(16)	BTL4	Analyzing
13	(i) Analyze the components of a hypermedia message. (ii) Examine the interaction among hypermedia message components.	(8) (8)	BTL4	Analyzing
14	(i) Investigate integrated document management techniques in multimedia systems. (ii) Analyze the role of distributed multimedia systems in information management.	(8) (8)	BTL4	Analyzing
15	Analyze the application of Blender graphics in multimedia content development.	(16)	BTL4	Analyzing
16	Examine the role of modelling, shading and textures in multimedia design.	(16)	BTL4	Analyzing
17	Investigate the challenges involved in multimedia authoring and distributed multimedia systems.	(16)	BTL4	Analyzing

UNIT IV – AUGMENTED REALITY

Working with AR techniques – Compatibility with the environment – AR system architecture – AR terminology – Application areas of AR – Integration of AR toolkits with existing IDEs (Unity–Vuforia, Visual Studio, NetBeans, IntelliJ IDEA, Android, iOS) – Connectivity of smart devices with AR.

PART-A

Q.No	Question	BTL	Competence
1	Define Augmented Reality.	BTL1	Remembering

2	List the components of an AR system.	BTL1	Remembering
3	What is AR terminology?	BTL1	Remembering
4	Define AR toolkit.	BTL1	Remembering
5	Name any two AR development platforms.	BTL1	Remembering
6	What is Vuforia?	BTL1	Remembering
7	Define AR system architecture.	BTL1	Remembering
8	Identify any two application areas of AR.	BTL1	Remembering
9	What is marker-based AR?	BTL1	Remembering
10	Specify any two smart devices used in AR.	BTL1	Remembering
11	Define environment compatibility in AR.	BTL1	Remembering
12	Name any two IDEs used for AR development.	BTL1	Remembering
13	State the purpose of Augmented Reality.	BTL2	Understanding
14	Mention the significance of AR system architecture.	BTL2	Understanding
15	Give the importance of AR toolkits in application development.	BTL2	Understanding
16	State the need for environment compatibility in AR systems.	BTL2	Understanding
17	Mention the features of AR terminology.	BTL2	Understanding
18	Give the applications of Vuforia in AR development.	BTL2	Understanding
19	Classify the application areas of AR.	BTL2	Understanding
20	Relate AR technology to smart device connectivity.	BTL2	Understanding
21	Categorize IDEs used for AR development.	BTL2	Understanding
22	State the characteristics of AR in industrial applications.	BTL2	Understanding
23	Mention the benefits of AR-based systems.	BTL2	Understanding
24	Give the advantages of smart device integration in AR environments.	BTL2	Understanding
PART-B			
1	(i) Demonstrate the working of Augmented Reality techniques in a real-world application. (ii) Implement AR techniques in a suitable application environment.	(8) (8)	BTL3 Applying
2	Develop an AR application using suitable AR development tools.	(16)	BTL3 Applying
3	(i) Construct the architecture of an Augmented Reality system with a neat diagram. (ii) Develop an AR system based on the constructed architecture.	(8) (8)	BTL3 Applying
4	Implement environment compatibility features in an AR application.	(16)	BTL3 Applying
5	Design an AR-based solution for an educational application.	(16)	BTL3 Applying
6	Develop an AR application using Unity and Vuforia.	(16)	BTL3 Applying

7	(i) Implement smart device connectivity in an Augmented Reality environment. (ii) Develop an AR application integrating smart devices.	(8) (8)	BTL3	Applying
8	(i) Construct an AR framework for an industrial application. (ii) Implement AR techniques in the developed framework.	(8) (8)	BTL3	Applying
9	Analyze the architecture of an Augmented Reality system and explain the interaction among its components.	(16)	BTL4	Analyzing
10	Compare different AR development platforms used for building AR applications.	(16)	BTL4	Analyzing
11	Examine the role of AR terminology in AR application development.	(16)	BTL4	Analyzing
12	Analyze the compatibility requirements of AR systems in different environments.	(16)	BTL4	Analyzing
13	(i) Analyze the application areas of Augmented Reality. (ii) Distinguish the use of AR in education and industrial sectors.	(8) (8)	BTL4	Analyzing
14	Investigate the integration of AR toolkits with existing IDEs.	(16)	BTL4	Analyzing
15	Differentiate AR toolkits used in mobile and desktop AR development.	(16)	BTL4	Analyzing
16	Analyze the connectivity of smart devices in Augmented Reality systems.	(16)	BTL4	Analyzing
17	Examine the challenges involved in developing and deploying AR applications.	(16)	BTL4	Analyzing

UNIT V – VIRTUAL REALITY

Integration of VR techniques – Content objects and scale – Gaze behavior and interactables – IDE setup with package files – Concepts and features of VR – VR project example.

PART-A

Q.No	Question	BTL	Competence
1	Define Virtual Reality.	BTL1	Remembering
2	List the components of a VR system.	BTL1	Remembering
3	Define content object in VR.	BTL1	Remembering
4	What is scale in Virtual Reality?	BTL1	Remembering
5	Name any two VR devices.	BTL1	Remembering
6	Define gaze behavior.	BTL1	Remembering
7	What is an interactable in VR?	BTL1	Remembering
8	Identify any two VR development tools.	BTL1	Remembering
9	Define IDE setup in VR development.	BTL1	Remembering
10	Specify any two package files used in VR development.	BTL1	Remembering

11	What is a VR project?	BTL1	Remembering	
12	Name any two applications of Virtual Reality.	BTL1	Remembering	
13	State the purpose of Virtual Reality.	BTL2	Understanding	
14	Mention the significance of content objects in VR environments.	BTL2	Understanding	
15	Give the importance of scale in Virtual Reality.	BTL2	Understanding	
16	State the need for gaze behavior in VR systems.	BTL2	Understanding	
17	Mention the features of interactables in VR applications.	BTL2	Understanding	
18	Give the applications of Virtual Reality in education and training.	BTL2	Understanding	
19	Classify VR devices used in immersive environments.	BTL2	Understanding	
20	Relate content objects to VR project development.	BTL2	Understanding	
21	Categorize the components of a VR system.	BTL2	Understanding	
22	State the characteristics of immersive VR environments.	BTL2	Understanding	
23	Mention the benefits of IDE setup in VR development.	BTL2	Understanding	
24	Give the advantages of Virtual Reality in real-world applications.	BTL2	Understanding	
PART-B				
1	Develop a Virtual Reality application using suitable VR techniques.	(16)	BTL3	Applying
2	(i) Construct a virtual environment using content objects and scale. (ii) Develop a VR scene incorporating suitable content objects.	(8) (8)	BTL3	Applying
3	Implement gaze behavior in a Virtual Reality application.	(16)	BTL4	Analyzing
4	Design interactive VR environments using interactables.	(16)	BTL3	Applying
5	Develop a VR-based learning application using immersive technologies.	(16)	BTL3	Applying
6	Implement VR techniques in a real-world application.	(16)	BTL3	Applying
7	Develop a Virtual Reality project using suitable VR tools.	(16)	BTL3	Applying
8	(i) Construct a VR project using appropriate package files. (ii) Implement IDE setup for Virtual Reality application development.	(8) (8)	BTL3	Applying
9	Analyze the concepts and features of Virtual Reality.	(16)	BTL4	Analyzing
10	Compare different VR devices used in immersive environments.	(16)	BTL4	Analyzing
11	Examine the role of gaze behavior and interactables in VR systems.	(16)	BTL4	Analyzing
12	Analyze the significance of content objects and scale in Virtual Reality.	(16)	BTL4	Analyzing

13	(i) Analyze the process of VR project development. (ii) Distinguish the stages involved in VR application development.	(8) (8)	BTL4	Analyzing
14	Differentiate immersive and non-immersive Virtual Reality systems.	(16)	BTL4	Analyzing
15	Analyze the role of IDE setup and package files in VR development.	(16)	BTL4	Analyzing
16	Compare VR applications used in education, healthcare and entertainment.	(16)	BTL4	Analyzing
17	Examine the challenges involved in developing and deploying Virtual Reality applications.	(16)	BTL4	Analyzing

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