



B.E DEGREE EXAMINATIONS: MAY 2017

(Regulation 2014)

Sixth Semester

COMPUTER SCIENCE AND ENGINEERING

U14CSTE33: Multimedia Systems

COURSE OUTCOMES

CO1: Explain security issues and infrastructure of multimedia computing

CO2: Explain the workings of architectures and issues for distributed multimedia systems.

CO3: Apply various compression techniques for both audio and video.

CO4: Identify the appropriate network protocol mechanism for different multimedia communication systems.

CO5: Analyze the anatomy of multimedia information system.

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Match list I with list II and select the correct answer using the codes given below.

CO1 [K₂]

List I	List II
A. Quality of Service	i. Time-stamping
B. Synchronization	ii. Data acquisition
C. Multimedia transmission system	iii. Adaptability
D. Military radio	iv. Low data rates

- | | A | B | C | D |
|----|-----|----|-----|----|
| a) | ii | i | iii | iv |
| b) | iii | iv | ii | i |
| c) | ii | iv | iii | i |
| d) | iii | i | ii | iv |

2. Real-time processing is a tough challenge for _____

CO1 [K₂]

- | | |
|--------------|----------|
| a) Text | b) Audio |
| c) Animation | d) Video |

3. Which one of the following abbreviations are correct about multimedia image and video techniques? CO2 [K₂]
1. PAL - Phase Alternating Line
 2. SECAM - Sequential Color with Active Monitor
 3. TWAIN – Television Working Archive In Network
 4. NTSC - National Television Standards Committee
- a) 1,3 b) 1,4
c) 1,2 d) 2,3
4. JPEG is a commonly used method of _____ for digital images. CO2 [K₂]
- a) Aspect ratio b) File name extension
c) MIMM media type d) Lossy compression
5. Assertion (A): A computer network is interconnected by communication channels CO3 [K₂]
Reason (R): When collection of various computers seems a single coherent system to its client, then it is called computer network.
- a) Both A and R are Individually true and R is the correct explanation of A b) Both A and R are Individually true but R is not the correct explanation of A
c) A is true but R is false d) A is false but R is true
6. Polycom _____ system supports meetings with peers all over the world. CO3 [K₂]
- a) Synchronous communication b) Multimedia
c) Video conference d) LAN
7. Consider the following cross site publishing CO4 [K₂]
1. Goto publishing site collection and select the catalog to publish
 2. Create two authoring sites
 3. Turn on features on authoring site collection
 4. Goto document library in authoring site collection
- Correct sequence of authoring site publishing is
- a) 2-3-4-1 b) 1-3-2-4
c) 3-4-2-1 d) 4-1-3-2
8. Hypermedia is a _____ medium of information. CO4 [K₂]
- a) linear b) nonlinear
c) Interactive presentation d) Hypercard

9. Assertion (A): Unstructured data refers to information that either does not have a pre-defined data model. CO5 [K₂]

Reason (R): Digital data will grow to peta bytes by 2020.

- a) Both A and R are Individually true and R is the correct explanation of A b) Both A and R are Individually true but R is not the correct explanation of A
c) A is true but R is false d) A is false but R is true

10. The continuous media file system clients read or write files in _____ CO5 [K₂]

- a) Sessions b) Interrelated signals
c) Different rates d) Simulation

PART B (10 x 2 = 20 Marks)

(Answer not more than 40 words)

11. State the challenges in Multimedia systems. CO1 [K₁]
12. List any four test editing tools used in multimedia. CO1 [K₁]
13. How video files are stored? CO2 [K₁]
14. Justify the need of video compression techniques? CO2 [K₃]
15. Compare packet switching and circuit switching networks. CO3 [K_L]
16. Compare the performances of high speed LANs for multimedia data transfer. CO3 [K_L]
17. List out various binary image compression techniques. CO4 [K_L]
18. What are the issues for multimedia authoring? CO4 [K₁]
19. List out the issues of Continuous Media File System (CMFS) in providing the data rate guarantees. CO5 [K₁]
20. How is synchronization achieved in streaming video across internet? CO5 [K₁]

Answer any FIVE Questions:-

PART C (5 x 14 = 70 Marks)

(Answer not more than 300 words)

Q.No. 21 is Compulsory

21. i) Explain about the predominant areas of multimedia applications in real time. (7) CO1 [K₂]
ii) List the advantages and disadvantages of multimedia system in the real world. (7) CO1 [K₂]
22. Explain MPEG-21 Multimedia Framework Architecture. CO2 [K₂]

- | | | |
|---|-----|-----------------------|
| 23. Explain the following with suitable example: | CO3 | [K ₂] |
| i) Movies on demand | (6) | |
| ii) Multimedia conferencing | (8) | |
| 24. Explain in detail the various video broadcasting standards: NTSC, PAL and SECAM | CO2 | [K ₂] |
| 25. Illustrate JPEG image compression standards with suitable example. | CO3 | [K ₂] |
| 26. Illustrate and explain various Hyper-media data models and standards | CO4 | [K ₂] |
| 27. i) Explain the Media Stream Protocol in detail | (7) | CO5 [K ₂] |
| ii) Explain new Operating System support provided for continuous media. | (7) | CO5 [K ₂] |
