

Department of Computer Science

17UCS6E7 - Multimedia Packages

K1 Level Questions

Multiple Choice Questions

1. A video consists of a sequence of

- A. Frames
- B. Signals
- C. Packets
- D. Slots

Ans: A

2. If frames are displayed on screen fast enough, we get an impression of

- A. Signals
- B. Motions
- C. Packets
- D. Bits

Ans: B

3. To receive signal, a translator is needed to decode signal and encode it again at a

- A. High Quality
- B. Lower Quality
- C. Same Quality
- D. Bad Quality

Ans: B

4. Session Initiation Protocol (SIP), is very

- A. Independent
- B. Flexible
- C. Dependant

D. Complex

Ans: B

5. Establishing a session in Session Initiation Protocol (SIP), requires a three-way

A. Protocols

B. System

C. Ports

D. Handshake

Ans: D

6. Moving Picture Experts Group (MPEG) is used to compress

A. Frames

B. Images

C. Audio

D. Video

Ans: D

7. A combination of an encryption algorithm and a decryption algorithm is called a

A. plain text

B. cipher

C. original text

D. shift cipher

Ans: B

8. . _____ is any combination of text, graphic art, sound, animation, and video delivered to you by computer or other electronic devices.

A. Multimedia

B. Network

C. Hyper media

D. Visual Media

ANSWER: A

9. You need hardware, software and _____ to make multimediaA. network B. compact disk driveC. good ideaD. programing knowledge

ANSWER: C

10. A structure of linked elements through which the user can navigate, interactive multimedia becomes _____.

A. Hypermedia
B. Hypertext
C. inter media
D. digital media

ANSWER: B

11. . XML stands for _____.

A. eXtra Multi Language
B. eXprimental Markup Language
C. eXtensible Making Language
D. eXtensible Markup Language

ANSWER: D

12. Most common compression technique that is used to create CD-quality audio is based on perceptual encoding technique is called

A. Predictive Encoding
B. Perceptual Encoding
C. MPEG
D. JPEG

Answer: B

13. In Audio and Video Compression, each frame is divided into small grids, called picture elements or

A. Frame
B. Packets
C. Pixels
D. Mega Pixels

Ans: C

14. Streaming stored audio/video, files are compressed and stored on

- A. IP
- B. Server
- C. Domain
- D. Internet

Answer: B

15. Live streaming is still using Transmission Control Protocol (TCP) and multiple unicasting instead of

- A. Unicasting
- B. Multicasting
- C. Layered Control
- D. Protocol Control

Answer: B

16. Moving Picture Experts Group (MPEG-2), was designed for high-quality DVD with a data rate of

- A. 3 to 6 Mbps
- B. 4 to 6 Mbps
- C. 5 to 6 Mbps
- D. 6 to 6 Mbps

Answer: A

17. Joint Photographic Experts Group (JPEG) is used to compress

- A. Music
- B. Pictures
- C. Images
- D. Frames

Ans: c

18. Real-time traffic needs support of

- A. Unicasting
- B. Multicasting
- C. Layered Control
- D. Protocol Control

Answer: B

19. We can divide audio and video services into

- A. 1 broad categories
- B. 2 broad categories
- C. 3 broad categories
- D. 4 broad categories

Answer: C

20. In Video Compression, an independent frame that is not related to any other frame is called

- A. B-Frame
- B. C-Frame
- C. I-Frame
- D. P-Frame

Answer: C

21. RTP uses a temporary even-numbered

- A. RTCP
- B. SMTP
- C. UDP port
- D. None

Answer: C

22. MP3 produces three data rates from 96 Kbps to

- A. 128 Kbps
- B. 164 Kbps
- C. 256 Kbps
- D. 320 Kbps

Answer: B

23. For music, we need to compress digitize signals at

- A. 1.41 I-MHz
- B. 1.42 I-MHz
- C. 1.45 I-MHz
- D. 1.48 I-MHz

Answer: A

24. Sometimes real-time traffic needs

- A. Organization
- B. Traffic
- C. Channelizing
- D. Translation

Answer: D

25. In Real-Time Transport Protocol (RTP), source periodically sends a source description message to give additional information about

- A. Message
- B. Itself
- C. Protocols
- D. Packets

Answer: B

26. Audio compression can be used for

- A. Speech or Music
- B. Voice and Data
- C. Picture and Colors
- D. Video and Voice

Answer: A

27. In Real Time Interactive Audio Video, conferencing requires two way communication between

- A. receivers and senders
- B. Packet to Frames
- C. Pixels to Packets
- D. Frames to Pixels

Answer: A

28. In Real Time Interactive Audio Video, Jitter is introduced in real-time data by delay between

- A. Frames
- B. Layers
- C. Pixels
- D. Packets

Answer: D

29. Session Initiation Protocol (SIP), has a mechanism that finds the

- A. Domain
- B. System
- C. IP Address
- D. Terminal

Answer: C

30. In Audio and Video Compression, voice is sampled at 8000 samples per second with

- A. 5 bits per sample
- B. 6 bits per sample
- C. 7 bits per sample
- D. 8 bits per sample

Answer: D

31. In Voice Over IP, Term SIP stands for

- A. Session Initiation Protocol
- B. Session Initiation Port
- C. Session Initiation Path
- D. Session Initiation Packet

Answer: A

32. In Real-Time Transport Protocol (RTP), A source sends a bye message to shut down a

- A. System
- B. Frames
- C. Protocol
- D. Stream

Answer: D

33. In Audio and Video Compression, term RBG expresses

- A. Red, Blue, Green
- B. Red, Black, Grey
- C. Rate, Bit, Giga bit
- D. Red, Bluish, Greyish

Answer: A

34. To perform tracking of an IP, Session Initiation Protocol (SIP), uses concept of

- A. Registration
- B. Termination
- C. Streaming
- D. Translation

Answer: A

35. A simple session using SIP consists of three modules: establishing, communicating and

- A. Translation
- B. Conversion
- C. Streaming
- D. Termination

Answer: D

36. Real-time traffic needs support of

- A. multicasting
- B. Translation
- C. integration
- D. security

Answer: A

37. Session Initiation Protocol (SIP), is designed to be independent of underlying

- A. Linear Layer
- B. Data Link Layer
- C. Transport Layer
- D. Presentation Layer

Answer: C

38. In lowest resolution a color frame is made of

- A. 1024 x 768 pixels
- B. 800 X 600 pixels
- C. 1152 X 864 Pixels
- D. 1280 X 1080 pixels

Answer: A

39. In Real Time Interactive Audio Video, data are stored in buffer at a possibly variable

- A. Pixels
- B. Packets
- C. Rates
- D. Bytes

Answer: C

40. In Real Time Interactive Audio Video, to prevent jitter, we can time-stamp packets and separate arrival time from the

- A. Frame Time
- B. Playback Time
- C. Pixels Time
- D. Packet Time

Answer: B

41. Real-time Transport Protocol (RTP) is protocol designed to handle real-time traffic on the

- A. Frames
- B. Internet
- C. IP
- D. Protocol

Answer: B

42. In Session Initiation Protocol (SIP), session can be terminated with a

- A. OK Message
- B. Bye Message
- C. Terminate Message
- D. Quit Message

Answer: B

43. RTCP stands for

- A. Real-time Transport Control Program
- B. Real-time Transport Control Packet
- C. Real-time Transport Control Protocol
- D. Real-time Transport Control Path

Answer: C

44. A compressed audio/video file can be downloaded as a

- A. Image
- B. Video
- C. Frame
- D. Text file

Answer: D

45. When a caller needs to communicate with callee, caller can use e-mail address instead of IP address in the

- A. OK Message
- B. Bye Message
- C. INVITE Message
- D. Great Message

Answer: C

46. Purpose of dividing picture into blocks is to decrease number of

- A. Channels
- B. Pixels
- C. Calculations
- D. Frames

Answer: C

47. In Real Time Interactive Audio Video, a sequence number on each packet is required for

- A. real-time traffic
- B. real-time Playback
- C. real-time pixels
- D. real-time frames

Answer: A

48. Before audio or video signals can be sent on Internet, they need to be

- A. Channelized
- B. Managed
- C. Digitized
- D. Organized

Answer: C

49. For speech, we need to compress digitize signals at

- A. 128 Khz
- B. 256 Khz
- C. 64 Khz
- D. 1152 Khz

Answer: C

50. Moving Picture Experts Group (MPEG-1), was designed for a

- A. PC
- B. CD
- C. DVD
- D. Floppy

Answer: B

Department of Computer Science

17UCS6E7 - Multimedia Packages

K2 Level Questions

Define Computer Graphics

Computer graphics remains one of the most existing and rapidly growing computer fields. Computer Graphics may be defined as a pictorial representation or graphical representation of objects in a computer.

2. Define Random scan/Raster scan displays?

Random scan is a method in which the display is made by the electronic beam which is directed only to the points or part of the screen where the picture is to be drawn. The Raster scan system is a scanning technique in which the electrons sweep from top to bottom and from left to right. The intensity is turned on or off to light and unlight the pixel. Write down the attributes of characters

3. What is Aspect ratio?

The ratio of vertical points to the horizontal points necessary to produce length of lines in both directions of the screen is called the Aspect ratio. Usually the aspect ratio is $\frac{3}{4}$.

4. What is aliasing and antialiasing?

In the line drawing algorithms, all rasterized locations do not match with the true line and have to represent a straight line. This problem is severe in low resolution screens. In such screens line appears like a stair-step. This effect is known as aliasing. The process of adjusting intensities of the pixels along the line to minimize the effect of aliasing is called antialiasing.

5. What is pixel phasing?

Pixel phasing is an antialiasing technique, stair steps are smoothed out by moving the electron beam to more nearly approximate positions specified by the object geometry.

6. What do you mean by emissive and non-emissive displays?

The emissive display converts electrical energy into light energy. The plasma panels, thin film electro-luminescent displays are the examples. The Non emissive are optical effects to convert the sunlight or light from any other source to graphic form. Liquid crystal display is an example.

7. What do you mean by scan conversion?

A major task of the display processor is digitizing a picture definition given in an application program into a set of pixel-intensity values for storage in the frame buffer. This digitization process is called scan conversion.

8. What is an output primitive?

Graphics programming packages provide function to describe a scene in terms of these basic geometric structures, referred to as output primitives.

9. What is Transformation?

Transformation is the process of introducing changes in the shape size and orientation of the object using scaling rotation reflection shearing & translation etc.

10. What is translation?
Translation is the process of changing the position of an object in a straight-line path from one coordinate location to another. Every point (x, y) in the object must undergo a displacement to (x',y'). the transformation is:

$$x' = x + tx$$

$$y' = y + ty$$

10. What is rotation?

A 2-D rotation is done by repositioning the coordinates along a circular path, in $X = r \cos (q + f)$ and $Y = r \sin (q + f)$.

12. What is scaling?

The scaling transformations changes the shape of an object and can be carried out by multiplying each vertex (x,y) by scaling factor S_x, S_y where S_x is the scaling factor of x and S_y is the scaling factor of y. 5. What is shearing? The shearing transformation actually slants the object along the X direction or the Y direction as required. ie; this transformation slants the shape of an object along a required plane.

13. What is reflection?

The reflection is actually the transformation that produces a mirror image of an object. For this use some angles and lines of reflection.

14. Distinguish between window port & view port.

A portion of a picture that is to be displayed by a window is known as window port. The display area of the part selected or the form in which the selected part is viewed is known as view port.

15. Define clipping?

And types of clipping. Clipping is the method of cutting a graphics display to neatly fit a predefined graphics region or the view port. Σ Point clipping Σ Line clipping

16. What is the need of homogeneous coordinates?

To perform more than one transformation at a time, use homogeneous coordinates or matrixes. They reduce unwanted calculations intermediate steps saves time and memory and produce a sequence of transformations.

17. What is fixed point scaling?

The location of a scaled object can be controlled by a position called the fixed point that is to remain unchanged after the scaling transformation.

20. What is the use of clipping?

Clipping in computer graphics is to remove objects, lines or line segments that are outside the viewing volume.

21. How will you clip a point?

Assuming that the clip window is a rectangle in standard position, we save a point $P=(x,y)$ for display if the following inequalities are satisfied: $x_{wmin} \leq x \leq x_{wmax}$ $y_{wmin} \leq y \leq y_{wmax}$ where the edges of the clip window (x_{wmin} , x_{wmax} , y_{wmin} , y_{wmax}) can be either the worldcoordinate window boundaries or viewport boundaries. If any one of these inequalities is not satisfied, the points are clipped (not saved for display).

22. Define viewing transformation.

The mapping of a part of world coordinate scene to device coordinates are called viewing transformation. Two dimensional viewing transformation is simply referred to as window to viewport transformation or the windowing transformation.

25. Define Multimedia?

Multimedia is defined as a Computer based Interactive Communication process that incorporates text, numeric data, record based data, graphic art, video and audio elements, animation etc. It is used for describing sophisticated systems that support moving images and audio. Eg. Personal Computer.

26. Give the applications of Multimedia?

Document Imaging Image Processing and Image Recognition Full Motion Digital Video Applications Electronic messaging Entertainment Corporate Communications

27. What are the data elements of MM?

Facsimile Document Images Photographic Images Geographic Information System Maps (GIS) Voice Commands and Voice Synthesis Audio Messages Video Messages Full motion stored and Live Video Holographic Images Fractals

28. State the resolution of Facsimile, Document Images and Photographic Images?

Facsimile-100 to 200 dpi Document images – 300 dpi (dots/pixels per inch) Photographic images – 600 dpi.

29. What is the compression technique used in Facsimile and Document Images?

Facsimile - CCITT Group3 Document Images - CCITT Group4

30. What are the applications of Photographic Images?

Photographic images are used in Imaging Systems that are used for identification such as Security Badges Fingerprint Cards Photo Identification Systems Bank Signature Cards Patient Medical Histories

31. What is the use of Document Images? It is used for storing business documents that must be retained for long periods of time and accessed by large number of people. It removes the need for making several copies for storage or distribution. 8. Explain about GIS Systems? GIS means Geographic Information System Maps. It is used for natural resource and wild life management and urban planning.

32. What are the two technologies used for storage and display of GIS systems?

Raster Storage Raster Image (Raster Image has basic color map, vector overlay and text display) 14. Explain about Voice Synthesis? This approach breaks down the message completely to a canonical form based on phonetics. It is used for presenting the results of an action to the user in a synthesized voice. It is used in Patient Monitoring System in a Surgical Theatre.

33. What is Isochronous Playback?

Isochronous playback is defined as a playback at a constant rate. Audio and Video systems require isochronous playback.

34. Explain about Full motion and live video?

Full motion video refers to prestored video clip. i.e., video stored in CD Eg: games, courseware, training manuals, MM online manuals etc Live video refers to live telecast. It is live and must be processed while the camera is capturing it i.e., Instant occurring is transferred at the same time. Eg: Live Cricket Show (in television)

35. Explain the terms Holography and Hologram?

Holography is defined as the means of creating a unique photographic image without the use of lens. The photographic recording of the image is called a Hologram.

36. State the use of Holographic images?

It is used in design and manufacturing tasks. Holographs on credit cards are used to ensure authenticity.

37. State the properties of Holographic images?

Holographic images are Not clear diagrams 3-dimensional can also be recorded on materials other than photographic plates 4. Records intensity of light and phase 5. created by coherent light using a laser beam.

38. Define Compression Efficiency?

Compression Efficiency is defined as the ratio in bytes of an uncompressed image to the same image after compression.

39. What is Image Processing?

Image Processing refers to processing a digital image using a digital computer. An image processing system will alter the contents of the image. It involves Image Recognition, Image Enhancement, Image Synthesis and Image Reconstruction.

40. Explain Image Calibration?

The overall image density is calibrated. In Image calibration the image pixels are adjusted to a predefined level.

41. What is Grayscale Normalization?

The overall grayscale of an image or picture is evaluated to determine if it is skewed in one direction and if it needs correction.

42. What is Frame Averaging?

The intensity level of the frame is averaged to overcome the effects of very dark or very light areas by adjusting the middle tones.

43. What is Image Animation?

Images are displayed sequentially at controlled display speeds to provide image animation. Image Animation is the basic concept of displaying successive images at short intervals to give the perception of motion. Image Animation is a technology developed by Walt Disney and brought to every home in the form of cartoons.

44. How Image Annotation is done?

Image Annotation can be performed in two ways •as a text file stored along the image. •as a small image stored with the original image.

45. Explain about Abstract images?

Abstract Images are not really images. They exist as real world objects or representations. They are computer generated images based on some arithmetic calculations. The examples are Fractals – Fractals are the result of computer generated algorithms it shows different patterns that can be created Kaleidoscope – Shows different patterns due to relative positions of glass beads when it is rotated.

46. What are the benefits of Multimedia Databases?

Significant reduction of time and space Increased productivity Simultaneous document access
Multidimensional information flow Reduction of time and money Facilitation of rapid and correct responses Documents are manageable

47. Explain about Massive Data Volumes?

In this storage technology only 20% of all strategic information is automated. More than 80% resides on paper or performed interactively in meetings, discussions and presentations.

48. Explain Microfiche and Microfilm?

Microfiche and Microfilm is used as a medium for storage of paper documents. Both have high level of mechanical failure and physical deterioration. Microfiche and Microfilm leaves a lot of noise on documents. Microfiche is a 4x6 sheet of film that holds hundreds of document pages. Microfilm is a continuous film strip that holds several thousands of document pages.

49. Give the two Mass Storage technologies?

The Mass storage technologies are used for storage of multimedia documents. They are Optical disk storage systems High speed magnetic storage

50. What is a BLOB?

BLOB means Binary Large Object. Relational Database has adopted a data type commonly known as BLOB. It is used for objects such as images or other binary data types.

Department of Computer Science

17UCS6E7 - Multimedia Packages

K3 Level Questions

Unit-1

1. Write short notes on design elements & Principle.
2. Write short notes on Illustration & Sketching.
3. What is Color Theory? Explain.
4. Explain about Composition & Typography.
5. Describe Business Goal.
6. Write about Process Blue Print.
7. Write short notes on Prototype Theory.
8. How to Create a Project from Start to Finish?
9. Sketch the types of animation
10. Write short notes on Animation Software.

Unit-2

1. How to Create a Graphics.
2. How to Apply Special Effects.
3. Explain about Effects and Color Correction.
4. Give a sketch about editing & optimizing Graphics for Web.
5. Give a sketch about Print & Broadcasting.
6. Give a note on Bitmap & Vector Graphics
7. Elucidate the Graphical Tools.
8. Discuss about Page Layout.
9. Write short notes on Print Media.
10. Elucidate E-Mail.

Unit-3

1. Give a sketch about Sound Forge.
2. Discuss about Gold Wave.
3. Write short notes on Editing and Mixing.
4. Elucidate on Audio Capturing.
5. Discuss Audio Mixing.
6. Explain about Audio Effect Generation.
7. Write short notes on Camtasia Studio.
8. Explain about Pinnacle Studio.
9. Discuss about Video Capturing.
10. Analyze Photo Graphic Techniques.

Unit-4

1. Briefly generalize the Organizer workspace.
2. Give a sketch about Premiere Elements Edit workspace.
3. Discuss about tasks panel workspaces.
4. Explain about Import Video in Premiere.
5. Write short notes on Video file types.
6. Elucidate Capturing video.
7. Write short notes on Adding videos using the Video Importer.
8. Give a sketch about Edit Clips.
9. Write short notes on editing tools.
10. Explain about trimming clips.

Unit-5

1. Explain about Adding Video Effects.
2. Discuss about effects, Find, apply, and preview effects
3. Write short notes on changing effect properties
4. Elucidate Adjust effect properties
5. Give a sketch on how to add titles.
6. Write short notes on editing a title.
7. Discuss about Working with Audio
8. Explain about adding an audio soundtrack
9. Write short notes on Share Video.
10. Explain about creating DVD files for web.

Department of Computer Science

17UCS6E7 - Multimedia Packages

K4 Level Questions

Unit-1

1. Analyze in detail about Color Theory.
2. Discuss in detail about Composition & Typography.
3. Analyze in detail about Understanding User Requirements.
4. Classify about Creating a Project from Start to Finish.
5. Categorize Different types of Animation.

Unit-2

1. Analyze the rise of Creating Graphics.
2. Give a brief notes on Effects and Color Correction.
3. Differentiate Editing & Optimizing Graphics For Print.
4. Give a neat sketch about Editing & Optimizing Graphics For Broadcasting
5. Give a brief note on Page Layout.

Unit-3

1. Analyze about Audio Capturing.
2. Discuss in detail about Video Formats Adobe Premiere.
3. Give a brief note on Video Capturing.
4. Give a neat sketch about Preparing and Video for Delivery.
5. Analyze the Photo Graphic Techniques.

Unit-4

1. Discuss in detail about Premiere Elements Edit workspace.
2. Classify the tasks panel workspaces.
3. Analyze Video file types.
4. Give a brief notes on adding videos using the Video Importer.
5. Discuss in detail about trimming clips.

Unit-5

1. Give a brief note on changing effect properties.
2. Discuss in detail about adjust effect properties.
3. Discuss in detail about adding an audio soundtrack.
4. Analyze about creating DVD files for web.
5. Give a brief notes on mobile phone or player.

Department of Computer Science

17UCS6E7 - Multimedia Packages

K5 Level Questions

Unit-1

1. Elaborate Design Techniques.
2. Evaluate Print & Publish Media.
3. Elaborate about Composition & Typography.
4. Criticize about Wireframe Design.
5. Judge all the technology configurations of Animation Software.

Unit-2

1. Criticize tone at the Concepts of Graphics.
2. Elaborate about Effects and Color Correction.
3. Evaluate Vector Graphics.
4. Judge the design techniques.
5. Elaborate Brochure.

Unit-3

1. Appraise about Digital Audio & Tools.
2. Judge about digital video & tools.
3. Elaborate Adobe Premiere.
4. Criticize Camtasia Studio.
5. Evaluate Pinnacle Studio.

Unit-4

1. Overview of Premiere Elements workspace.
2. Appraise Tasks panel workspaces.
3. Criticize about Import Video in Premiere.
4. Judge about Add videos using the Video Importer.
5. Elaborate Edit Clips.

Unit-5

1. Appraise Adding Video Effects.
2. Elaborate Adjust effect properties.
3. Judge about Add Titles.
4. Evaluate Work With Audio.
5. Appraise about Share Video.