**CCS352-MULTIMEDIA AND ANIMATION**

**UNIT 1**

**PART A**

1.Define the term multimedia.Multimedia is an integration of text, image, graphic, audio, video and animation Due toits varying scope, several definitions have been proposed by many authors.

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2.What are the main characteristics of multimedia system?

Use of multiple mediaNonlinearityInteractivityIntegrityDigita1 representation3. Define interactive multimedia.It is a platform where the user or the viewer can control the elements ofmultimedia presentation.

3.Define Hypermedia.

 It is an interactive media in which the user can navigate through a structure of linkedelements.

4.Define multimedia developers.These are people who generate and manipulate images, text, audio and video, usemultimedia computer tools and technologies to weave them together.

5.Define multimedia project.A multimedia project is a unique process that requires significant effort andResources in order to reach a definite outcome within specified time and cost restrains.

6.Define multimedia title.If is the title of the project which is instructive and gives information about the projectCoat has to be delivered, sold or downloaded.

7.Define authoring tools.These are software tools that are designed to manage all the elements multimediaand provide user interaction.9.

8.Define Graphical User Interface (GUI).

This is the actual graphics present on the screen which provides rules for user input. It isthe sum of what elements are to be played and how they are supposed appear.

9.Write a short note on object linking and embedding.Microsoft's Object Linking and Embedding allow objects to be linked or embedded. Normally,data of an object is present in a linked object and the original to edit the object, that is, the native data is present in a pointer to an actual file.

10.What is meta data ?

Metadata is defined as data that provides information about another piece ofcontent but not the data itself, such as a picture or the text message's content. It assistsusers in understanding the meaning of the data and is essential in ensuringcompliance with regulations and data governance initiatives. Metadata containsinformation such as the data's origin, meaning, location ownership and creation

**UNIT 2**

**PART A**

**FOUR Lingo Event Hierarchy (Highest to Lowest Precedence)**  
*(5 Marks)*

1. **ExitFrame** – Executes last in a frame after all updates.
2. **PrepareFrame** – Executes just before entering a new frame.
3. **BeginSprite** – Executes when a sprite first appears on the stage.
4. **EnterFrame** – Executes at the start of each frame.

*(Note: Some references may vary slightly depending on context, but this order is commonly accepted in terms of how events are triggered during movie playback.)*

**3. What is a CuePoint? One Primary Benefit**  
*(3 Marks)*

A **cuePoint** is a marker set at a specific time or frame within a media file (like a QuickTime movie). It can be used to trigger events or actions when the playback reaches that point.

**Primary Benefit:**  
CuePoints allow precise synchronization between multimedia events—like triggering animations, subtitles, or scripts—without constant time-checking in code.

**4. Puppet Transition Function – Definition and Syntax**  
*(3 Marks)*

A **puppet transition function** in Lingo allows you to override Director's default transition settings for a sprite or cast member and take control of how it appears or disappears.

**General Syntax:**

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puppetTransition <spriteNumber>, <transitionType>

**Example:**

lingo

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puppetTransition 3, 26

This command applies transition type 26 to sprite number 3. Once a sprite is under puppet control, it ignores timeline-based transitions.

**5. Steps to Create an Empty 3D Cast Member to Populate with 3D Data**  
*(5 Marks)*

1. Open the **Cast window**.
2. Choose **Insert > New Cast Member > 3D**.
3. Name the new cast member (optional but recommended for clarity).
4. Select the 3D cast member and open the **3D Stage** window.
5. Use Lingo to **populate it with 3D data**, such as models or shapes via import scripts or primitives (e.g., newModel, newTexture).

**6. Behavior Script to Hold Playhead Until QuickTime Movie Finishes**  
*(3 Marks)*

lingo

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-- Behavior: Hold on Frame Until Movie Finishes

property spriteNum

on exitFrame me

if sprite(spriteNum).movieRate = 0 then

go to the frame

end if

end

**Explanation:**  
This behavior keeps the playhead on the current frame (go to the frame) until the QuickTime movie has finished playing (indicated by movieRate = 0).

**UNIT 3**

**PART A**

**. Digital Audio (2 Marks):**  
Digital audio refers to sound that has been recorded, stored, or transmitted in a digital format. It involves converting analog sound waves into a series of binary numbers that can be processed by computers.

**ii. Plug-ins (2 Marks):**  
Plug-ins are small software components that add specific features or functionalities to a larger software application, such as web browsers or audio/video editing programs.

**iii. Multimedia (2 Marks):**  
Multimedia is the integration of different types of media—such as text, audio, images, animation, and video—into a single interactive platform or application.

**iv. Multimedia Designer (2 Marks):**  
A multimedia designer is a creative professional who uses various media tools to create engaging content, such as websites, animations, videos, or interactive applications.

**v. Streaming (2 Marks):**  
Streaming is a method of transmitting or receiving data (especially audio and video) over a network in real time, allowing playback to begin while the rest of the data is still being delivered.

**UNIT 4**

**PART A**

**11. What is the name of the programming/scripting language of Flash?**  
ActionScript is the scripting language used in Adobe Flash. It allows developers to control animations, handle user input, and integrate multimedia elements interactively in Flash applications.

**12. What is the name of the function for integrating multimedia elements, programmatically and/or without programming, using software to create a multimedia project?**  
Authoring is the process of combining text, images, video, audio, animation, and interactivity into a single multimedia application. This can be done using authoring tools like Adobe Flash or Adobe Director, where users can design multimedia content either visually (without code) or programmatically (with scripting).

**13. What method of animation creates the in-between frames when you create the start and end points of the animation?**  
Tweening (short for “in-betweening”) is a technique used in animation where the software automatically generates intermediate frames between two keyframes, creating smooth transitions or movement.

**14. A broadcast / NTSC video requires how many FPS for it to play smoothly?**  
NTSC (National Television System Committee) is a video standard used in North America and parts of Asia. To ensure smooth motion and compatibility with television broadcasts, NTSC video runs at approximately 29.97 frames per second. This frame rate synchronizes with the power frequency and minimizes flickering on TV screens.

**15. What is another name for 2D animation?**  
2D animation, also known as cel animation, involves drawing each frame by hand (traditionally on transparent celluloid sheets). It is one of the oldest forms of animation, where characters and backgrounds are drawn in two dimensions, frame by frame, to simulate movement.

**UNIT 5**

**PART A**

**16. What is scan conversion?**  
Scan conversion is the process of converting vector graphics (geometric data) into raster images (pixels) for display on a screen. It translates shapes like lines and polygons into pixel patterns.

**17. What is rasterization?**  
Rasterization is the process of converting an image or object into a grid of pixels for output on a raster display. It's commonly used in rendering 3D graphics to 2D screens.

**18. What is horizontal retrace of the electron beam?**  
Horizontal retrace is the movement of the electron beam in a CRT display from the end of one scan line back to the start of the next line. It happens during the blanking interval to avoid displaying unwanted visuals.

**19. Write the types of clipping.**

* Point Clipping
* Line Clipping
* Polygon Clipping
* Text Clipping
* Curve Clipping

**20. What is meant by scan code?**  
A scan code is a code sent by a keyboard to the computer to indicate which key was pressed or released. It represents the physical location of the key on the keyboard, not the character.