UNIT 1

Explain the significance of hyperlinks in hypermedia. Provide examples of hypermedia applications.

Define Multimedia and Hypermedia. How do they differ from each other?

Explain the difference between the World Wide Web and the Internet.

What are the key components of a URL (Uniform Resource Locator)?

Discuss the importance of HTML in the context of web development.

How does multimedia authoring software facilitate the integration of text, graphics, audio, and video elements?

Provide an overview of commonly used multimedia software tools. How do they contribute to content creation and editing?

Define graphics and image data representation. How is digital image data different from analog image data?

What is color science, and how does it apply to multimedia?

Discuss the significance of color models in video. How do they impact video quality?

Differentiate between analog and digital video signals. What are the advantages of digital video?

Discuss the role of MIDI (Musical Instrument Digital Interface) in digital audio.

UNIT 2

Compare and contrast ActionScript I and ActionScript II. What improvements does ActionScript II bring over its predecessor?

How does Object-Oriented Programming (OOP) enhance the development process in ActionScript?

Examine the significance of type safety in ActionScript. How does it impact the reliability of code?

Discuss the role of classes in encapsulation and abstraction in ActionScript programming.

How can ActionScript classes be instantiated, and what is the significance of constructors in this process?

Explore the concept of inheritance in depth. How does it contribute to code organization and maintenance?

Provide examples of situations where interfaces in ActionScript II would be beneficial.

Explain the purpose and benefits of using packages in ActionScript II.

How are exceptions handled in ActionScript II? Provide examples of scenarios where exception handling is crucial.

Discuss best practices for organizing and structuring ActionScript code to ensure readability and maintainability.

UNIT 3

Explain the concept of an Object-Oriented Programming (OOP) Application Framework. How does it facilitate application development?

Discuss the role of Movie Clip Subclasses in ActionScript. How do they enhance the functionality of multimedia applications?

Explain the principles of Run-Length Coding as a lossless compression algorithm. Provide examples to illustrate its application.

Discuss the concept of Variable Length Coding in the context of lossless compression. How does it achieve compression in data representation?

Describe the operation of Dictionary-Based Coding as a lossless compression technique. Provide scenarios where it is particularly effective.

Explain the fundamentals of Arithmetic Coding. How does it differ from other lossless compression methods?

Discuss the challenges and considerations in applying lossless compression to image data. How does it impact image quality

Define Quantization as a lossy compression algorithm. How does it affect the quality of multimedia data?

Discuss the Embedded Zero Tree of Wavelet Coefficients as a compression technique. How does it improve compression efficiency?

Examine the principles of Set Partitioning in Hierarchical Trees (SPIHT) as an embedded coding algorithm. How does it address the challenges of multimedia data compression?

UNIT 4

What is video compression, and why is it essential in multimedia applications?

Explain the concept of video compression based on motion compensation. How does it reduce redundancy in video data?

Describe the process of searching for motion vectors in video compression. How do motion vectors contribute to compression efficiency?

Provide an overview of the MPEG (Moving Picture Experts Group) standard. What are its key components, and how does it achieve video compression?

Discuss the trade-offs involved in video compression. How does compression affect video quality and file size?

Why is audio compression necessary in multimedia applications?

Explain the basic principles of audio compression techniques. How do they reduce the file size of audio data?

Compare and contrast lossless and lossy audio compression. What are the advantages and disadvantages of each approach?

Discuss the concept of psychoacoustic modeling in audio compression. How does it contribute to compression efficiency?

Provide an overview of popular audio compression standards such as MP3 and AAC. How do they achieve high compression ratios while maintaining acceptable audio quality?

UNIT 5

Define Multimedia Networks. How do they differ from traditional data networks?

Explain the key characteristics and requirements of multimedia data transmission over networks.

How do multimedia networks handle different types of media, such as audio, video, and interactive content?

Describe the characteristics and advantages of ATM (Asynchronous Transfer Mode) networks for multimedia transmission.

Provide an overview of MPEG-4 and its role in multimedia content.

Define Media-on-Demand (MOD) and its significance in multimedia networks.