Multimedia Systems and Applications

<table>
<tr><th>No</th><th>Questions</th></tr>
<tr><td>1.</td><td>Explain various components of multimedia</td></tr>
<tr><td>2.</td><td>Explain briefly about (a) Dithering (b) Rendering</td></tr>
<tr><td>3.</td><td>What do you mean by compression? What is the need of it?</td></tr>
<tr><td>4.</td><td>Write the algorithms for LZW coding scheme. (In C Language)</td></tr>
<tr><td>5.</td><td>Write the algorithm for LZW decoding scheme. (In C Language)</td></tr>
<tr><td>6.</td><td>What is the difference between hypermedia and multimedia.</td></tr>
<tr><td>7.</td><td>Write the formula for 2D Discrete Cosine Transform and Inverse Discrete Cosine Transform.</td></tr>
<tr><td>8.</td><td>Give full form of following multimedia associated words.
1. BMP
2. JPEG
3. HTML
4. GIF
5. TIFF
6. PNG
7. HTML
8. XML</td></tr>
<tr><td>9.</td><td>What is the difference of Lossless and Lossy compression? Give two examples of file format for each of them.</td></tr>
<tr><td>10.</td><td>What is multimedia Authoring. Explain it with some useful editing and authoring tools.</td></tr>
<tr><td>11.</td><td>Explain the various file formats used in multimedia system</td></tr>
<tr><td>12.</td><td>List and explain various color models used in Image and Videos.</td></tr>
<tr><td>13.</td><td>What is the difference between Midtread Vs Midrise quantizer</td></tr>
<tr><td>14.</td><td>Write short note on “Multimedia in the Future”.</td></tr>
<tr><td>15.</td><td>Explain three basic types of video transitions.</td></tr>
<tr><td>16.</td><td>Explain types of images.</td></tr>
<tr><td>17.</td><td>Explain GIF descriptor with format.</td></tr>
<tr><td>18.</td><td>What do you mean by Polynomial Texture Mapping?</td></tr>
<tr><td>19.</td><td>Explain Compression ration and Entropy.</td></tr>
<tr><td>20.</td><td>Encode the message “CAEE$” using arithmetic coding.
<table>
<tr><th>Symbol</th><th>Probability</th><th>Range</th></tr>
<tr><td>A</td><td>0.2</td><td>[0, 0.2)</td></tr>
<tr><td>B</td><td>0.1</td><td>[0.2, 0.3)</td></tr>
<tr><td>C</td><td>0.2</td><td>[0.3, 0.5)</td></tr>
<tr><td>D</td><td>0.05</td><td>[0.5, 0.55)</td></tr>
<tr><td>E</td><td>0.3</td><td>[0.55, 0.85)</td></tr>
<tr><td>F</td><td>0.05</td><td>[0.85, 0.9)</td></tr>
<tr><td>$</td><td>0.1</td><td>[0.9, 1.0)</td></tr>
</table></td></tr>
<tr><td>21.</td><td>What do you mean lossy compression? What are the measures for it?</td></tr>
<tr><td>22.</td><td>What do you mean by Vector quantization?</td></tr>
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1. What do you mean by Augmented and Virtual Reality? Explain Anatomy of AR and VR Systems.
2. What are the Limitations and Challenges of AR?
3. What do you mean by Private vs Public cloud computing? Give conceptual overview of Cloud Computing along with its characteristics.
4. Explain Router-Based Architectures: IP Multicast.
5. What Differentiated Service? Discuss about per-hop behaviours and traffic allocation schemes.
6. Explain the importance of Rate Control and Buffer Management in multimedia communication network.
7. Explains Protocols for Multimedia Transmission and Interaction.
8. Brief about H.264. Draw its Video encoding block diagram.
9. Explain five prediction modes used in MPEG 2.
10. Explain JPEG compression technique.
11. Difference between Lossy and Lossless compression algorithms.
12. What is Multimedia Computation Offloading and why it is required?
13. What is Interactive Cloud Gaming, its challenges and draw its architecture.
14. Give AN overview of MPEG 4 scheme.
15. Explain VOP-based Coding scheme.