**SRM Institute of Science and Technology**

**SET C**

**College of Engineering and Technology**

**School of Computing**

**DEPARTMENT OF COMPUTING TECHNOLOGIES**

SRM Nagar, Kattankulathur – 603203, Chengalpattu District, Tamilnadu

**Academic Year:2023-2024 (ODD)**

**Test: CLAT III** **Date: 09-11-2023**

**Course Code & Title: 18CSE353T & Digital Image Processing**  **Duration:** **2 Periods**

**Year & Sem:** **III Year / V Sem** , **IV Year / VII Sem** **Max. Marks:** **50**

**Course Articulation Matrix:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S.No.** | **Course Outcome** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | **PO11** | **PO12** |
| 1 | **CO1** | H |  | H |  | H |  |  |  |  |  |  |  |
| 2 | **CO2** | H |  | H |  | H |  |  |  |  |  |  |  |
| 3 | **CO3** | H |  | H |  | H |  |  |  |  |  |  |  |
| 4 | **CO4** | H |  | H |  | H |  |  |  |  |  |  |  |
| 4 | **CO5** | H |  | H |  | H |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Part – B**  **( 4 x 10 = 40 Marks)** | | | | | | |
| 11.a | Encode the message BCCABBDDAECCBBAEDDCC using Huffman coding and calculate the final bits  **OR** | **10** | **3** | **2** | **3** | **3.6.2** |
| 11.b | Explain the general compression system model. | **10** | **2** | **2** | **3** | **3.6.2** |
| 12.a | Summarize the following  i. Lossy predictive coding  ii. Run Length coding  **OR** | **10** | **3** | **2** | **3** | **3.6.3** |
| 12.b | Encode the following using Arithmetic coding  message : went.  Probability : e - 0.3, n-0.3, t-0.2, w-0.1, .-0.1 | **10** | **3** |  | **3** | **3.6.2** |
| 13.a | Write short notes on following  i. Signatures  ii.Boundary segments  **OR** | **10** | **2** | **3** | **3** | **3.6.2** |
| 13.b | Describe in detail about texture and pattern classes | **10** | **3** | **3** | **3** | **3.6.3** |
| 14.a | Explain about Polygonal approximation with an example  **OR** | **10** | **3** | **3** | **3** | **3.6.2** |
| 14.b | Discuss About chain code in detail with an example | **10** | **3** | **3** | **3** | **3.6.2** |

**\*Performance Indicators are available separately for Computer Science and Engineering in AICTE examination reforms policy.**

**Course Outcome (CO) and Bloom’s level (BL) Coverage in Questions**