# Atal Bihari Vajpayee Indian Institute of Information Technology & Management, Gwalior

## IT402: Digital Image Processing

Minor Examination (Session 2024–25)

### Maximum Time: 1 Hour    Max Marks: 20

*Note: Attempt all questions. Wherever possible, support answers with neat sketches.*

1. Define spatial and frequency domain methods of image enhancement with suitable examples. (4 Marks)

2. Perform a 2×2 Discrete Cosine Transform (DCT) on the following block: 5255 6166 and explain how DCT is useful in compression. (5 Marks)

3. A noisy fingerprint image has poor contrast and uneven illumination. Suggest a **step-by-step enhancement pipeline** using DIP techniques. Justify each step. (5 Marks)

4. Write short notes on (any two): (a) Point processing operations (b) Homomorphic filtering (c) Applications of DIP in satellite imaging (6 Marks)