Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 08

M.Tech.(IT) (2015 & Onwards)/(CSE Engg.) (2015 to 2017) (Sem.–1)

DIGITAL IMAGE PROCESSING

Subject Code : MTCS-105

M.Code : 72633

Time : 3 Hrs. Max. Marks : 100

INSTRUCTIONS TO CANDIDATES :

1. **Attempt any FIVE questions out of EIGHT questions.**
2. **Each question carries TWENTY marks.**

Q1. List the various characteristics of the following :

(a) Three dimensional image processing

(b) Digital image representation

Q2. Explain the following concepts with suitable examples :

(a) Removal of blur caused by uniform linear motion

(b) Redundancy and fidelity criteria in image compression

Q3. Differentiate between the following :

(a) Slant transform and KL Transform

(b) Constrained and Unconstrained image restoration

Q4. Write short notes on the following :

(a) Image subtraction and image averaging in image enhancement

(b) Hit and miss algorithms in image segmentation

Q5. Discuss the various application areas of the following :

(a) Color image processing

(b) Image segmentation

Q6. Explain the various limitations of the following :

(a) 2D orthogonal and unitary transforms

(b) RGB model

Q7. Discuss the implementation details of the following :

(a) Sampling and quantization

(b) 2D linear space invariant systems

Q8. Write the development stages of :

(a) Arithmetic coding techniques for image compression

(b) Algebraic approach to restoration

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.