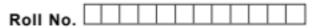


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M.Tech.(IT) (2015 & Onwards)/(CSE Engg.) (2015 to 2017) (Sem.-1) DIGITAL IMAGE PROCESSING Subject Code : MTCS-105

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

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- 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.

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