

C.U.SHAH UNIVERSITY

Summer Examination-2017

Subject Name: Digital Image Processing

Subject Code: 4TE08DIP1

Branch: B.Tech (CE)

Semester: 8

Date : 18/04/2017

Time : 02:30 To 05:30

Marks :70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
 - (2) Instructions written on main answer book are strictly to be obeyed.
 - (3) Draw neat diagrams and figures (if necessary) at right places.
 - (4) Assume suitable data if needed.
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Q-1 Define Following Terms: (14)

- (a) Gray level resolution
- (b) Spatial resolution
- (c) Pixel
- (d) Connectivity
- (e) Image Segmentation
- (f) Region
- (g) Edge
- (h) Boundary
- (i) Structuring element
- (j) Discontinuity based Segmentation Approach
- (k) Exponential noise
- (l) Contrast
- (m) Histogram.
- (n) Blind Spot in Human Eye

Attempt any four questions from Q-2 to Q-8

Q-2 Attempt all questions (14)

- (a) Give some applications of Digital Image Processing.
- (b) Explain Fundamental Steps in Digital Image Processing with block diagram.

Q-3 Attempt all questions (14)

- (a) Explain Components of an Image Processing System with block diagram.
- (b) Explain the Structure of Human Eye with figure.

Q-4 Attempt all questions (14)

- (a) Explain Simple Image Formation Model.
- (b) Explain Bit-Plane Slicing. How it is Performed?



