

This question paper contains **2** printed pages]

BR—408—2016

FACULTY OF COMPUTER STUDIES

M.Sc. (Second Year) (Third Semester) EXAMINATION

OCTOBER/NOVEMBER, 2016

(CBCS Pattern)

COMPUTER SCIENCE

Paper CS-304

(Digital Image Processing Using MATLAB)

(Wednesday, 23-11-2016)

Time : 2.00 p.m. to 5.00 p.m.

Time—Three Hours

Maximum Marks—75

N.B. :— (i) All questions carry equal marks.

(ii) Figures to the right indicate full marks.

1. Attempt any *three* of the following : 15

(a) Explain advantages using MATLAB.

(b) What do you mean by image sensing ?

(c) Explain concept of data classes.

(d) Explain “Histogram” in detail.

(e) What is frequency domain filtering ?

2. Attempt any *three* of the following : 15

(a) Explain color image representation in MATLAB.

(b) Explain 2D discrete Fourier transform.

(c) Explain concept of noise reduction.

(d) Explain concept of image sampling.

P.T.O.

3. Attempt any *three* of the following : 15
- (a) Explain the use of electromagnetic spectrum.
 - (b) Explain procedure to display histogram of an image using MATLAB.
 - (c) Explain model of image restoration process.
 - (d) What is image acquisition ?
4. Attempt the following (any *three*) : 15
- (a) Discuss “Digital image Representation” in detail.
 - (b) Explain any *five* MATLAB functions.
 - (c) Explain frequency domain filtering.
 - (d) Discuss wavelet decomposition structures.
5. Write short notes on the following (any *three*) : 15
- (a) Indexing
 - (b) Color space
 - (c) RGB image
 - (d) Periodic noise
 - (e) Use of MATLAB in DIP.