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**BP—09—2016**

**FACULTY OF COMPUTER STUDIES**

**B.Sc. (SE) (Fifth Semester) EXAMINATION**

**OCTOBER/NOVEMBER, 2016**

**SOFTWARE ENGINEERING**

(DIP Using Matlab)

**(Saturday, 19-11-2016)**

**Time : 10.00 a.m. to 1.00 p.m.**

*Time— Three Hours*

*Maximum Marks—80*

*N.B. :— (i) All questions are compulsory.*

*(ii) Figures to the right indicate full marks.*

*(iii) Assume suitable data, if necessary.*

1. Attempt the following : 20

- (a) Explain high-pass filtering.
- (b) Describe multidimensional arrays with example.
- (c) Explain image arithmetic functions.
- (d) Explain advantages of Matlab.

2. (a) Explain how to read and display a digital image in Matlab. 8

(b) Explain logarithmic transformation. 7

*Or*

(c) Explain looping statement in Matlab. 8

(d) Describe linear spatial filtering. 7

3. (a) What is a M-function ? Explain it with an example. 8

(b) What is DFT ? Explain 1D-DFT. 7

*Or*

(c) Describe image degradation and restoration process in brief. 8

(d) Explain low-pass filtering. 7

P.T.O.

4. (a) What is histogram processing ? Explain in detail. 8  
(b) Explain different noise models. 7  
*Or*  
(c) Describe color image representation in Matlab. 8  
(d) Explain geometric transformation. 7
5. Write short notes on (any *three*) : 15  
(a) Converting color spaces  
(b) Operators in Matlab  
(c) Variables and Arrays  
(d) Image Registration  
(e) Spatial filtering.