Reg. No.									

MANIPAL UNIVERSITY
SCHOOL OF INFORMATION SCEINCES

SECOND SEMESTER MASTER OF ENGINEERING - **ME** (MEDICAL SOFTWARE)
DEGREE EXAMINATION – APRIL / MAY 2016

SUBJECT: MMS 610 – ADVANCED IMAGE PROCESSING

Friday, April 29, 2016

Time: 10.00 – 13.00 Hrs. Max. Marks: 100

1. Explain briefly the various thresholding approaches used for segmentation. (10 marks)

2. What is morphological image processing? Explain the morphological operations namely erosion and dilation. How are they useful in image processing? (2+5+3 = 10 marks)

3. Explain agglomerative clustering algorithm and demonstrate it with the help of an example. (10 marks)

4. Describe Hamming 7-4 Channel encoding and decoding technique in connection with image compression. (10 marks)

5. Describe the various scalability aspects of JPEG 2000 compression standard. (10 marks)

6. Explain how wavefront array processors can be used for real time image processing with the help of an example. (10 marks)

7. Write short notes on
   (i) Fourier Descriptor (ii) Topological descriptor
   (5+5 = 10 marks)

8. What is the purpose of Feature selection? Describe any two feature selection methods. (2+(4x2) =10 marks)

9. What is the role of a classifier in the pattern recognition system? How is the performance of a classifier evaluated? (2+8 =10 marks)

10. Explain the data flow in conventional film base and compare it with PACS (10 marks)

******