

## Mirpur University of Science & Technology, MUST Mirpur AJ&K <u>Department of Software Engineering</u>

| Course Title: |  | Digital Image processing | Semester:  | Fall-2016 |
|---------------|--|--------------------------|------------|-----------|
| Course Code:  |  | SE-427                   | Max Marks: | 50        |
| Instructor:   |  | Engr. Afzal Ahmed        |            |           |
| INSTRUCTIONS: |  |                          |            |           |
| i.            | There shall be no submission after deadline.   |                          |            |           |
| ii.           | Report shall follow the IEEE standards.  |                          |            |           |
| iii.          | Copied assignments shall result in zero marks no matter who copied whom.   |                          |            |           |
| Title         | Analysis of OCT images for noise removal and layer Segmentation  |                          |            |           |
| Abstract      | Many important eye diseases as well as systemic diseases manifest themselves in the retina. While a number of other anatomical structures contribute to the process of vision, this project focuses on retinal imaging and image analysis. Retinal layer thickness, evaluated as a function of spatial position from optical coherence tomography (OCT) images is an important diagnostics marker for many retinal diseases. However, due to factors such as speckle noise, low image contrast, irregularly shaped morphological features such as retinal detachments, macular holes, and drusen, accurate segmentation of individual retinal layers is difficult. So the very first step before we can go through to layer segmentation is noise removal. We are doing research on how to efficiently remove noise without losing any of the valuable data. Once the noise is removed layer segmentation would be less difficult to do. And the individual segmented layers will help diagnose the ocular diseases. |                          |            |           |

**Good Luck**