Session: 2003-BS-CS&E, 7th semester.
Instructor: Rashid Kaleem.
Time: 30 Minutes.

Session Quiz (30 Marks)

SWITCH OFF your mobiles. Write your roll number IMMEDIATELY. Attempt ALL questions. Keep your answers BRIEF as irrelevant detail would be marked negatively. Questions that require pseudo-code should be answered ONLY with readable pseudo-code, no descriptions are necessary. Start answering ON your question paper (at the back as well) and attach additional sheets (with you ROLL NUMBER atop each sheet and sheet number) as necessary. If you have any issues, raise your hand.

1. Write down the algorithm to select the best window having an aspect Ratio R from a frame of size H by W. [2]
2. Define a transformation function using either log transform or power law transform for compressing the initial portion of the range a – b(a and b are intensity values) and expanding the end portion. The other two ranges 0 – a and b – 255 should remain unchanged. [3]
4. Define a transformation function using either log transform or power law transform for compressing the initial portion of the range a – b(a and b are intensity values) and expanding the end portion. The other two ranges 0 – a and b – 255 should remain unchanged. [3]
5. Write a pseudo code for applying a high pass filter on an image after converting it into frequency domain, and then converting the result back into spatial domain. [10]
6. What is the affect of applying morphological closing on a binary image?[4]
7. How can we detect lines 2 pixels thick oriented with the x-axis? [4]