

Uva Wellassa University of Sri Lanka
Faculty of Science and Technology
Department of Computer Science & Technology
1st Semester Examination March/April 2013
CST361-2 Computer Graphics



PART-B

1.
 - a. Name six (6) application areas of Computer Graphics with an example for each. (6 mark)
 - b. What are Realistic Lighting and Reflections Challenges? (5 mark)
 - c. What are five (5) main challenges of Computer Games? (5 mark)
 - d. Explain in-detail about three (3) stages of Graphics Pipeline? (6 mark)
 - e. Processing objects 1-by-1 with a graphics pipeline has a major advantage and also a major disadvantage. Name them. (3 mark)

2.
 - a. Explain the difference between additive colour (RGB) and subtractive colour (CMY). (6 mark)

 - b. Calculate the ultimate monitor resolution (i.e. colour pixels/inch) at which point better resolution will be identical. (4mark)

 - c. Some company has developed an Autostereo Device capable of creating "true" three dimensional views by displaying slightly shifted images to each eye. It creates 16 of these views. Assume that the device has the following characteristics:
 - vertical flyback time = 200 μ s
 - image aspect ratio (horizontal: vertical) = 4:3
 - pixel clock = 144MHz
 - views = 16
 - flicker threshold = 50Hz
 - uses video interlacing
 - i. Explain each of the terms above. (6 mark)
 - ii. Calculate the maximum resolution per view consistent with the above characteristics. (3 mark)

 - d. Briefly explain following terms.
 - i. Square pixels
 - ii. Hexagonal pixels
 - iii. Triangles(6 mark)

