**AMBO University Woliso Campus**

**School of Technology & Informatics**

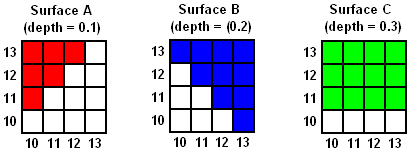
**Department of Computer Science**

**Assignment for Computer Graphics prepared for 3rd year CS (R) and 4th year extension CS Students for second Semester.**

1. Compare and contrast **CRT**, **LCD, LED, Plasma** **panel** display technology based on the following criteria

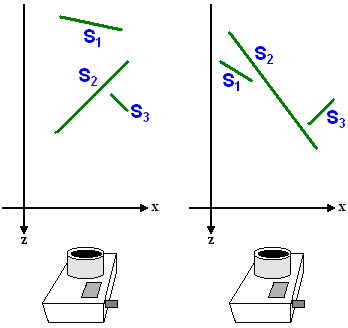
* Cost, Weight, Size
* Power consumption
* Spatial & Color resolution
* Peak brightness, Black, contrast

1. Typically, the **refreshing rate for CRT is** 60 – 80 times per second (Hz). What will happen if refreshing is too slow or too fast?
2. Select one hidden surface removal technique and explain its basic characteristics using examples?
3. Suppose we have three surfaces in a scene that all project to the same region of the image. The projected positions in the image are illustrated by the figure below.



All pixels in surface A will be drawn in red, all pixels in surface B in blue, and all pixels in surface C in green. The normalised depths of each surface are shown in the figure. Assuming that the surfaces are drawn in the order C, A B, explain how the depth-buffering algorithm would produce the correct occlusions.

1. Consider the arrangement of surfaces shown in the figures (a) and (b) below. For each, explain how the depth-sorting algorithm would order these surfaces for scan-conversion.



**(a) (b)**

1. Write the application modelling in computer graphics.
2. Discuss the difference between DDA and Bresenham's line drawing algorithm.

### What does it mean by RGB, CMY and HSV color model? and explain how they are operating.

**Note**:

* This assignment should be including introduction, body and final conclusion for each and every question.
* After you finish, send on this “[**abdisalechisa@gmail.com**](mailto:abdisalechisa@gmail.com) “email address
* **Phone number: 0923607747**