Vavuniya Campus of the University of Jaffna

Second Examination in Information and Communication Technology - 2014

Second Semester - February/March 2016

ICT2272 Practical for Computer Graphics

Answer All Questions

Time Allowed : Three hours

1. Write a Java program to perform each of the following tasks:

    (a) Implement the *Bresenham's circle algorithm* to draw a circle. [10%]

    (b) Implement the *boundary fill algorithm* with *4-connected* region. [10%]

    (c) Create an object as shown in Figure 1 using the circle drawing algorithm and filling algorithm implemented in part (1.a) and part (1.b), where radius of outer circle r should be obtained by a *mouse event*.
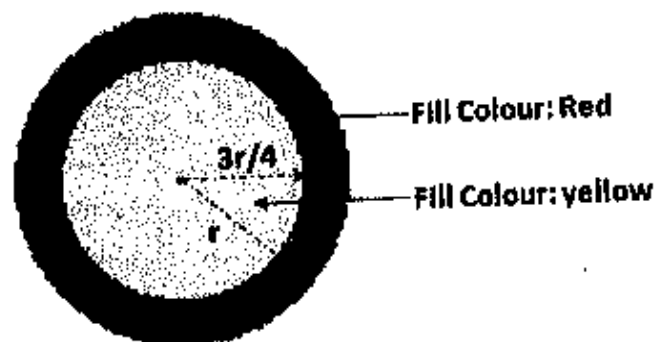

Figure 1. [15%]

1

2. Write a Java program to perform each of the following tasks:

(a) Implement the *DDA Line drawing algorithm* to draw a line.

(b) Draw the triangle ABC as shown in Figure 2 using the line drawing algorithm implemented in part (2.a) with given properties.
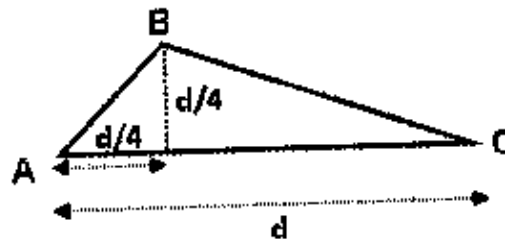

Figure 2.

(c) Construct the object as shown in Figure 3 using the appropriate transformation applying on the triangle ABC, where the triangle ABC is highlighted with bold line.
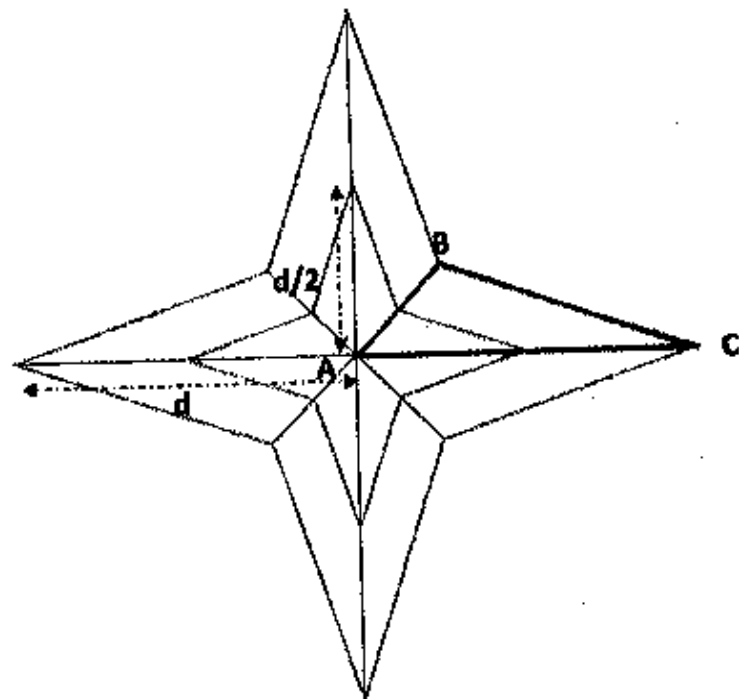

Figure 3.