Reg. No. | | | | | | | | | |

CSH 502

Third Semester M.Sc. Degree Examination, Dec. 2018/Jan. 2019
COMPUTER SCIENCE
Computer Graphics and Multimedia

Time : 3 Hours Max. Marks : 70

Note : *Answer* ***any five*** *questions.* ***All*** *questions carry* ***equal*** *marks.*

1. a) Explain different color models used in Computer Graphics.

   b) Define Computer Graphics. Explain any three uses of computer graphics applications. **(7+7)**

2. a) Discuss the pipeline architecture of Computer Graphics along with the diagram.

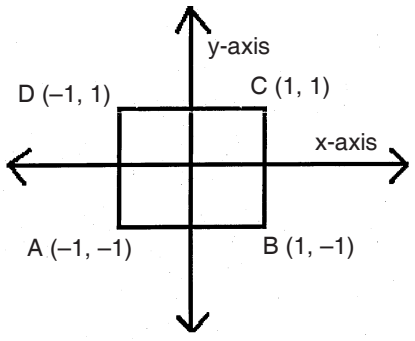
   b) What are the various operations performed on vectors ? Briefly explain how you construct coordinate system using given two vectors and a point. **(7+7)**

3. a) Explain how graphics libraries are organized in Opengl.

   b) Discuss the classifications of logical input devices. **(7+7)**

4. a) Define homogeneous coordinate system. Derive and explain the transformation matrices for 2D transformations.

   b) How transformation about fixed point is different from transformation about origin ? Perform scaling transformation about fixed point A(–1, –1). **(7+7)**



P.T.O.

5. a) Compare and contrast parallel and perspective projections. Derive their projection matrices.

   b) Define Clipping. Explain the Cohen-Sutherland line clipping algorithm with an example. **(7+7)**

6. a) Explain Bresenham's line algorithm and show how Bresenham's line algorithm draws a line that starts with (4, 4) and ends with (–3, 0).

   b) Describe Z-buffer algorithm for hidden surface removal with an example. **(8+6)**

7. a) Discuss various image and sound file formats in multimedia.

   b) What is virtual reality ? Explain types of virtual reality. **(8+6)**

8. a) Explain any four evolving technologies for multimedia system.

   b) Write a note on following : **(8+6)**

      i) Hypertext

      ii) Video on demand.
