

5th SEM./ INFORMATION TECHNOLOGY /2021(W)

Th4- Computer Graphics & Multimedia

Full Marks: 80

Time- 3 Hrs

Answer any five Questions including Q No.1& 2
Figures in the right hand margin indicates marks

1. Answer **All** questions 2 x 10
 - a. Define computer graphics.
 - b. What is pixel?
 - c. Define multimedia.
 - d. Define hue, saturation.
 - e. Define 16 bit & 24 bit colour depth.
 - f. Define amplifier.
 - g. What is frame buffer?
 - h. Distinguish between window port & view port.
 - i. Define homogeneous coordinate representation for translation & scaling.
 - j. What is aspect ratio?
2. Answer **Any Six** Questions 6 x 5
 - a. Differentiate between raster scan display & random scan display.
 - b. Explain the DDA line drawing algorithm for drawing a line.
 - c. Explain the application of computer graphics.
 - d. What is viewing transformation? Explain the procedure for transform of 2D window coordinate to viewport coordinate.
 - e. Differentiate between parallel projection & perspective projection.
 - f. Explain Bezier curves & surfaces.
 - g. Explain different audio file format used in digital audio.
3. Define clipping. Briefly explain the Cohen-Sutherland line clipping algorithm. 10
4. Explain the five basic 3D geometric transformation techniques. 10
5. What are the different light sources used in 3D modelling? Explain the basic illumination model. Briefly 10
6. What is area filling? Write about boundary fill algorithm for filling the area of a polygon with certain colour. 10
7. What are the different TV broadcast standards adopted by various parts of the world? Explain the main features of each format in detail. 10