(e) Explain the process of anti-alliasing in display graphics.

(f) Show that mid-point of a line is invariant with scaling transformation.

3. Attempt any **Two** of the following questions: **6 x 2 = 12**

(a) Explain the Bresenham's line drawing algorithm in 2D. Hence give the pixel positions for the line joining the points (4,4) and (9,9).

(b) How is clipping done in three-dimensional domain? Discuss the various options for selecting different types of view volumes.

(c) What is a Spline curve? Explain the role of blending function to plot a spline curve.

4. Attempt any **Two** of the following questions: **6 x 2 = 12**

(a) Describe how can the first order parametric continuity achieved at the common control point of the two Bezier curves.

(b) What do you mean by hidden lines and surfaces? Describe area subdivision method for removing hidden surfaces.

(c) Why do we need two types of continuity in joining two curve segments? Define each type.

5. Attempt any **Two** of the following questions: **6 x 2 = 12**

(a) Define Multimedia authoring tool. How is it better than multimedia programmer tool?

(b) Describe the importance of compression in multimedia system. Compare and contrast JPEG and MPEG techniques.

(c) Explain the special visual effect morphing in graphics animation.

Roll No. | | | | | | | | | | |

B.C.A.

FIFTH SEMESTER EXAMINATION, 2017-18

COMPUTER GRAPHICS & MULTIMEDIA APPLICATION

Time : **3 Hours** Max. Marks : **60**

Note : **(i)** Attempt **ALL** questions.
(ii) Choices are given in each question set.

1. Attempt any **Four** of the following questions: **3 x 4 = 12**

(a) What is Scaling in computer graphics?

(b) What are the hardware devices used for computer graphics?

(c) Describe the functions of flat panel displays.

(d) Explain why RGB color model is used for display. How different shades of colors are generated on the RGB monitors?

(e) Describe the operation of Scanner. What criteria would you use for selecting scanner?

(f) What are homogeneous coordinates and what are its merits and demerits as related to computer graphics?

2. Attempt any **Four** of the following questions: **3 x 4 = 12**

(a) Write the difference between Vector and Raster graphics.

(b) Define Random and Raster scan displays.

(c) Explain the Sutherland Cohen line-clipping algorithm. Is this applicable to any type of window? Justify your answer.

(d) Describe video compression method, what are the steps to optimize video files on CD-ROM?