

Code No: 117BX

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year I Semester Examinations, November/December - 2016

COMPUTER GRAPHICS

(Information Technology)

Time: 3 Hours

Max. Marks: 75

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART- A**(25 Marks)**

- 1.a) What are functions of Graphics? [2]
- b) Explain Line attributes. [3]
- c) What are different Inverse Transformations? [2]
- d) What is meant by Text Clipping? [3]
- e) What are features of Cubic Spline? [2]
- f) Describe viewing pipelines in 3D. [3]
- g) What is Back face Detection? [2]
- h) Describe Octree Method. [3]
- i) What are the key frame systems? [2]
- j) Explain the functions of Computer Animation. [3]

PART-B**(50 Marks)**

- 2.a) Describe Circle Generation Algorithm. [5]
 - b) Describe different features of Input Devices. [5]
- OR**
3. Explain Polygon and Spline curves with example. [10]
- 4.a) Explain about 2D Viewing Functions. [5]
 - b) Describe any two clipping operations. [5]
- OR**
5. Discuss about Sutherland-Hodgeman Polygon clipping with illustration. [10]
6. Explain different Spline representation with example. [10]
- OR**
7. Explain the following:
 - a) B-Spline Curves
 - b) BETA-SPLINES
 [5+5]
8. Describe about:
 - a) Area Subdivision Method
 - b) BSP-Tree Method
 [5+5]
- OR**
- 9.a) What are different Light Sources? [5]
 - b) Differentiate between Phong Shading and Fast Phong Shading. [5]
10. Discuss different Motion Specifications of objects in an animation system. [10]
- OR**
- 11.a) Write about Morphing Technique. [5]
 - b) How objects are animated along with 2D motion paths using color-table animations. [5]