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***B.Tech. Degree V Semester Special Supplementary Examination
April 2022***

**CS 15-1506 COMPUTER GRAPHICS
(2015 Scheme)**

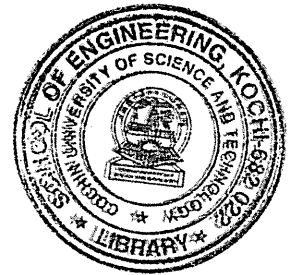
Time: 3 Hours

Maximum Marks: 60

**PART A
(Answer *ALL* questions)**

(10 × 2 = 20)

- I. (a) Explain shadow mask crt.
(b) Compare raster scan and random scan systems.
(c) Explain the logical classification of input devices.
(d) Explain Cohen-Sutherland line clipping.
(e) Prove that successive scaling are multiplicative.
(f) Explain Sutherland-Hodgman polygon clipping.
(g) Compare image space and object space approach.
(h) Explain back face detection.
(i) Explain constant intensity shading.
(j) Explain RGB color system.



PART B

(4 × 10 = 40)

- II. Explain midpoint circle drawing algorithm. Generate the intermediate points for the circle whose centre is at (0,3) and radius 3. (10)
- OR**
- III. Explain DDA line drawing algorithm. Generate the intermediate points for the line whose end points are (10,10) and (20,18). (10)
- IV. Explain two dimensional viewing pipe line. (10)
- OR**
- V. Explain the basic two dimensional transformations. (10)
- VI. Explain three dimensional rotation of an object about arbitrary axis in three dimensional space. (10)
- OR**
- VII. Explain Z-buffer algorithm. What are the limitations of it? How can we rectify it? (10)
- VIII. Explain Gouraud shading and Phong Shading. (10)
- OR**
- IX. Explain the steps involved in designing an animation sequence. Explain how the motions of objects can be specified in an animation system. (10)