

II B. Tech II Semester Regular/Supplementary Examinations, November - 2020
COMPUTER GRAPHICS
 (Information Technology)

Time: 3 hours

Max. Marks: 70

- Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
 2. Answer **ALL** the question in **Part-A**
 3. Answer any **FOUR** Questions from **Part-B**

PART -A

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|-------|--|----|
| 1. a) | Explain text clipping. | 2M |
| b) | What are the advantages of B spline over Bezier curve? | 3M |
| c) | What are key frame systems? | 2M |
| d) | What is Gouraud shading. | 3M |
| e) | What is fractal dimension? | 2M |
| f) | Define environment array? | 2M |

PART -B

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|-------|---|-----|
| 2. a) | Explain the following reflection in brief?
(i) Reflection of an object about the x axis
(ii) Reflection of an object about the y axis
Reflection axis as the diagonal line $y = x$ | 7M |
| b) | Explain the working of the Sutherland - Hodgeman algorithm for polygonal clipping with the help of suitable example. | 7M |
| 3. a) | Illustrate 3d scaling with examples? | 7M |
| b) | Explain the process of generating curves and surfaces using Hermite method. | 7M |
| 4. a) | Discuss about the luminosity function of three primary colors. | 7M |
| b) | Explain the procedure for drawing three dimensional scenes. | 7M |
| 5. a) | Compare and contrast between flat and smooth shading models with necessary examples. | 7M |
| b) | Write the characteristics of the following illumination parameters.
i) Diffuse reflection
ii) Specular reflection and
iii) Refraction. | 7M |
| 6. a) | Discuss the classification of Fractals. | 7M |
| b) | Describe the Creation of images by iterated functions. | 7M |
| 7. | Write short notes on | 14M |
| a) | Ray tracing | |
| b) | Boolean operations on Objects | |