

Total No. of Questions – [08]

Total No. of Printed Pages 02

G.R. No.	
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Paper code - U228-144 (ESE)

**MAY 2019/ENDSEM**  
**S. Y. B. TECH. (IT) (SEMESTER - II)**  
**COURSE NAME: COMPUTER GRAPHICS**  
**COURSE CODE: ITUA22174**  
**(PATTERN 2017)**

Time: [2 Hours]

[Max. Marks: 50]

**(\*) Instructions to candidates:**

- 1) Answer Q.1, Q.2, Q.3, Q.4, Q.5 OR Q.6, Q.7 OR Q.8
- 2) Figures to the right indicate full marks.
- 3) Use of scientific calculator is allowed
- 4) Use suitable data where ever required

Q.1) a) Rasterize a line from (20,10) to (30,18) using Bresenham's line drawing algorithm. [6]

**OR**

b) What is the concept of display file and display file interpreter. [6]

Q.2) a) Discuss any two polygon filling methods. [6]

**OR**

b) Write short note on 2D transformation and its applications. [6]

Q.3) a) Organize different types of parallel and perspective projections into tree structure and give details. [6]

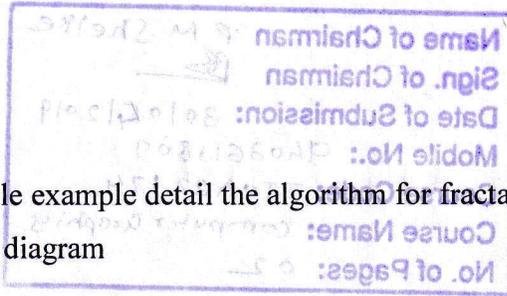
**OR**

b) Draw and Clarify the process of rotation about z axis. [6]

Q.4) a) Brief Cohen-Sutherland line clipping algorithm with diagram [4]

**OR**

b) What is segment? Explain segment creation operation [4]



- Q.5) a) With the suitable example detail the algorithm for fractal lines for generation of coastlines with diagram [6]
- b) Describe Animation sequences, functions & Languages [4]
- c) Provide details of the faceted shading algorithm. What are drawbacks of it. [4]

**OR**

- Q.6) a) Enlist the steps of Gourad Shading in detail. [6]
- b) Describe the process of Koch curve generation. [4]
- c) Differentiate between video and animation? What are different types of animation? [4]

- Q.7) a) Explain JPEG encoder and decoder with block diagram. [6]
- b) Describe fundamental steps of image processing. [4]
- c) What is bit depth? Give example of various bit depths. [4]

**OR**

- Q.8) a) What is quantization? How it is carried out in JPEG? [6]
- b) Differentiate between physical and logical compression? [4]
- c) Write short note on TIFF and GIF. [4]