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Paper code – U229-144 (BE-F&F)

DEC 2019/ENDSEM – Backlog Exam
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 (10,10) to (22,20) using Bresenham's line drawing algorithm. [6]

OR

b) Discuss OPELGL commands to draw shapes. [6]

Q.2) a) Discuss seed fill polygon filling methods. [6]

OR

b) Write short note on 2D translation. [6]

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

OR

b) Draw and Clarify the process of 3D scaling. [6]

Q.4) a) Brief region code concepts of used in line clipping algorithm with diagram [4]

OR

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

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- Q.5) a) With any suitable example detail the algorithm for fractal lines. [6]
b) Describe different types of Animation. [4]
c) Provide details of the faceted shading algorithm. What are drawbacks of it. [4]

OR

- Q.6) a) Enlist the steps of Phong Shading in detail. [6]
b) Describe the process of Koch curve generation. [4]
c) Explain key framing animation with example? [4]

- Q.7) a) Explain JPEG encoder 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 symmetrical and asymmetrical compression? [4]
c) Write short note on BMP and GIF. [4]

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