

Roll No.

Total No. of Pages: 02

Total No. of Questions: 09

M.Sc. (IT) (2015 Onwards) (Sem. – 3)

**COMPUTER GRAPHICS**

M Code: 74066

Subject Code: MSIT-301

Paper ID: [74066]

Time: 3 Hrs.

Max. Marks: 60

**INSTRUCTIONS TO CANDIDATES:**

1. SECTIONS-A, B, C & D contains TWO questions each carrying TEN marks each and students have to attempt any ONE question from each SECTION.
2. SECTION-E is COMPULSORY consisting of TEN questions carrying TWENTY marks in all.

**SECTION A**

1. What is graphics? Discuss the differences between active and passive graphics. 10
2. What are CRT and DVST? Draw and explain the structure of CRT. 10

**SECTION B**

3. Define arc and circle. Write and explain the scan conversion algorithm for circle drawing. 10
4. Explain the following:
  - a) Area filling techniques 5
  - b) Flood fill techniques 5

**SECTION C**

5. Define projection. Explain how perspective projection is different projection from parallel 10
6. Explain the following:
  - a) Need of homogenous coordinate system 5
  - b) Shearing and Reflection 5

### **SECTION D**

7. Write and explain the working of Z-buffer and painters algorithm.
8. What is Gouraud shading? Explain how it is different from Phong shading.

### **SECTION E**

9.
  - a) What is shadow masking?
  - b) Define refresh rate.
  - c) Define graphics tablets.
  - d) List various merits and demerits of scan conversion technique.
  - e) Define line and polygon.
  - f) Define scaling.
  - g) What is need of transformation?
  - h) What is use of constant intensity method?
  - i) Define morphing.
  - j) What is raster scan display?