

B.TECH SEM – VI (2007 COURSE) (COMPUTER ENGG.) :

SUMMER - 2018

SUBJECT : ADVANCED COMPUTER GRAPHICS

Day : **Monday**

Date : **11/06/2018**

S-2018-2713

Time : **02.30 PM TO 05.30 PM**

Max. Marks : 80

N.B.:

- 1) **Q. No. 1 and Q. No. 5 are COMPULSORY.** Out of the remaining attempt **ANY TWO** questions from Section – I and Section – II.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer books.
- 4) Use of non programmable **calculator** is **ALLOWED**.
- 5) Draw neat and labeled diagrams **WHEREVER** necessary.
- 6) Assume suitable data, if necessary.

SECTION - I

- Q.1** a) How bresenham's circle generation algorithm is better than DDA circle generation algorithm? (05)
- b) Explain various approaches used to represent polygon. (05)
- c) How we can perform basic 3D transformations on any graphical object? (04)
- Q.2** a) Describe following terms: (07)
1. Display File Structure 2. Display File Interpreter
- b) How to generate character "A" by using Starbust and Bit map method? (06)
- Q.3** a) What is meant by segmentation? What are different properties of segment table? (07)
- b) How cell encoding technique is used for scan conversion? (06)
- Q.4** a) How 2D rotation is performed with an arbitrary point? (06)
- b) Write a short note on: (07)
1. Windowing 2. Clipping

SECTION - II

- Q.5** a) How Gourand method is used for shading the object? (05)
- b) Enlist various interactive graphics devices along with its advantages. (05)
- c) Describe various primitives of Open GL. (04)
- Q.6** a) What is illumination? Elaborate diffused and point source illumination. (07)
- b) What are steps required to shade an object using Phong and Gourand shading? (06)
- Q.7** a) What are various methods of controlling an animation? Explain with examples. (07)
- b) Differentiate between interlaced and non interlaced display. (06)
- Q.8** a) With an example explain various basic primitives of Graphics Kernel System? (07)
- b) Explain graphics user interface with respect to MS-Windows. (06)

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