PG/IIIS/COS-302/19

M.Sc. 3rd Semester Examination, 2019

COMPUTER SCIENCE

(*Computer Graphics*)

PAPER –COS-302 (M1 & M2)

Full Marks : 50

Time : 2 hours

The figures in the right-hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

COS-302 (M1)

SECTION –I

1. Answer any *two* questions : 2 × 2

(*a*) What do you mean by *scan conversion* ?

(*b*) What is persistance of phosphor ?

(*c*) Define projection.

(*d*) What do you mean by the statement "Resolution of the Screen is 800 × 600" ?

SECTION – II

2. Answer any *two* questions : 4 × 2

(*a*) Explain the working principle of CRT.

(*b*) With the help of the precise narative description, write the algorithm of Bresenham's line drawing for all types of slope.

(*c*) Explain the different standards of 2D-shear.

(*d*) Differentiate between Raster scan display system and Random scan display system.

SECTION – III

3. Answer any *one* questions : 8 × 1

(*a*) Explain the different standards of 2D reflection.

(*b*) What is projection ? Explain the different types of projection available in computer graphics ?

[*Internal Assessment* : 05 Marks]

COS-302 (M2)

GROUP – A

4. Answer any *two* questions out of four questions : 2 × 2

(*a*) What is the use of MASK in image processing ?

(*b*) What do you mean by Gamma Correction ?

(*c*) What is Contrast Stretching ?

(*d*) What do you mean by Opening which is used in Morphological Image Processing ?

GROUP – B

5. Answer any *two* questions out of four questions : 4 × 2

(*a*) What is edge detector ? *Compare them.*

(*b*) What do you understand by Erosion and Dilation ? State their relation.

(*c*) What is Gradient and Laplacian ? Explain their use for sharpening filter in spatial domain.

(*d*) Explain the neighbour and connectivity of a pixel ? Why m-connectivity is superior than 8-connectivity.

GROUP – C

6. Answer any *one* question out of two questions : 8 × 1

(*a*) What is Histogram ? What do you mean by Histogram Equalization ? Explain with example.

(*b*) What do you mean by Image enhancement ? Explain three basic gray-level transformation for enhance the image.

[*Internal Assessment* : 05 Marks]