NAW-003-003401 Seat No. _____

# B.C.A. (Sem. IV) (CBCS) Examination

**March / April - 2017**

## CS-19 : Computer Graphics Using C

*(Old Course)*

**Faculty Code : 003**

**Subject Code : 003401**

Time : $2\frac{1}{2}$ Hours] [Total Marks : **70**

**Instruction :** Write answers of all the questions in main answer sheet.

**1** Attempt the following : **20**

(1) What is translation ?

(2) DDA stands for _____.

(3) Explain getcolor() function.

(4) What is Rotation ?

(5) Explain initgraph() function.

(6) Define : Pixel.

(7) What is shearing ?

(8) Explain window port ?

(9) Explain closegraph() function.

(10) VGA stands for _____.

(11) What is view port ?

(12) What is Polar co-ordinate ?

(13) Explain ellipse() function.

(14) The return type of getx() function is _____.

(15) Explain fillpoly() function.

(16) _____ function is used to exit from the graphic mode and also enter in text mode.

(17) What is line clipping ?

(18) Explain int86() function.

(19) What is Julia Set ?

(20) _____ header file should be included to perform graphics in C.

**2** (a) Attempt the following : (any **three**) **6**

(1) What is Resolution ?

(2) outtext() v/s. outtextxy().

(3) What is computer graphics ?

(4) Explain setgraphmode() and restorecrtmode() functions.

(5) Explain the properties of Bezier curve.

(6) What is clipping ?

(b) Attempt the following : (any **three**) **9**

(1) Explain DDA line drawing algorithm.

(2) Explain B-Spline.

(3) Text Mode v/s Graphics Mode.

(4) Explain Floodfill procedure.

(5) What is viewing pipeline ? Explain with example.

(6) Explain Homogeneous co-ordinate system.

(c) Attempt the following : (any **two**) **10**

(1) Explain Brasenham circle drawing algorithm.

(2) What is chart ? Explain different types of chart.

(3) Explain fractals.

(4) Explain Sutherland Cohen line clipping algorithm.

(5) Write a program for free hand drawing using mouse.

3 (a) Attempt the following : (any **three**) **6**

(1) putimage()

(2) sector()

(3) moveto()

(4) liner()

(5) detectgraph()

(6) getmaxcolor()

(b) Attempt the following : (any **three**) **9**

(1) What is dimension in Fractals ? Explain the types of dimension.

(2) Write a note of Shearing Transformation.

(3) Discuss 2D co-ordinate system.

(4) Write an application of computer graphics.

(5) Differentiate : Topological dimension and Fractal dimension.

(6) Explain Reflection.

(c) Attempt the following : (any **two**) **10**

(1) Write a program to draw self-similar fractals.

(2) Write a program to show and hide mouse pointer.

(3) Write a program to draw a line chart.

(4) Write a program for filling a rectangle using 8 connected seed filing.

(5) Write a program boundary fill procedure.