C 20576   (Pages : 2)   Name...

Reg. No....................................

SIXTH SEMESTER U.G. DEGREE EXAMINATION, MARCH 2022

(CBCSS—UG)

Computer Science

BCS 6B 16(d)—Computer Graphics

(2019 Admissions)

Time : Two Hours   Maximum : 60 Marks

Section A (Short Answer Type Questions)

Answer atleast **eight** *questions.*
Each question carries 3 marks.
All questions can be attended.
Overall Ceiling 24.

1. What is display processor ? List out its components.

2. What is gray scale in graphics ?

3. What do you mean by frame in graphics ?

4. Explain the technology behind LCD monitor.

5. What do you mean by scan conversion ?

6. Explain basic idea behind scan line polygon filling algorithm.

7. What is reflection transformation ? Explain with example.

8. What is the primary use of clipping ?

9. What are the basic transformations types in computer graphics ?

10. Describe windows and view ports.

11. What is the use of clipping in computer graphics ?

12. What do you mean by CMY color mode ?

(8 × 3 = 24 marks)

Turn over

Section B (Short Essay Type Questions)

Answer atleast **five** *questions.*
Each question carries 5 marks.
All questions can be attended.
Overall Ceiling 25.

13. Briefly explain various display devices in computer graphics ?

14. Differentiate between DDA and Bresenham's line drawing algorithm.

15. Explain any *one* polygon filling algorithm in computer graphics.

16. Explain any *two* in connection with 2D transformation :

    (a) Translation.

    (b) Rotation.

    (c) Scaling.

17. What is homogeneous transformation ?

18. Discuss in detail any *two* color models.

19. Explain the key features of GIMP.

$(5 \times 5 = 25 \text{ marks})$

Section C (Essay Type Questions)

Answer any **one** *questions.*
Each question carries 11 marks.

20. Explain scan conversion of Bresenham's circle generating algorithm.

21. Explain in detail Cohen Sutherland Polygon clipping algorithm.

$(1 \times 11 = 11 \text{ marks})$