Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages : 02

Total No. of Questions : 09

BMCI (2014 & Onwards)   (Sem.–3)
COMPUTER GRAPHICS
Subject Code : BSBC-602
Paper ID : [72584]

Time : 3 Hrs.   Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :
1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1   **Answer briefly :**

a) Define computer graphics.

b) What are the side effects of Scan conversion?

c) What is the RGB model of color generation?

d) Briefly discuss the shadow masking technique.

e) What is a display processor?

f) Differentiate between windowport and viewport.

g) Briefly discuss the flood fill technique.

h) What are the various methods of character generation?

i) Why are homogeneous coordinate systems required in computer graphics?

j) What do you mean by clipping operation? What is the difference between polygon clipping and text clipping?

SECTION-B

2   List the relative advantages and disadvantages of these systems various display devices used in computer graphics.

3   Explain the Bresenham's circle drawing algorithm.

4   Discuss 2-D translation and scaling with examples.

5   Differentiate between parallel and perspective projections. Which one gives a more realistic effect and why?

6   What are the principle vanishing points for the standard perspective projection?

SECTION-C

7   Describe the various display devices used in computer graphics.

8   Discuss Sutherland Hodgeman polygon clipping algorithm with an example.

9   What are 3-dimensional geometric transformations? Explain the basic 3-D transformations along with their matrix representation.