

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: MCA
BRANCH: MCA

SEMESTER : V
SESSION : MO/18

SUBJECT: MCA5001-COMPUTER GRAPHICS

TIME: 03:00 HRS.

FULL MARKS: 60

INSTRUCTIONS:

1. The question paper contains 7 questions each of 12 marks and total 84 marks.
 2. Candidates may attempt any 5 questions maximum of 60 marks.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1(a) Explain Cohen Sutherland line clipping algorithm. [6]
(b) Describe Bresenham's line drawing algorithm. [6]
- Q.2(a) Describe Beam Penetration method for producing color display using CRT. [6]
(b) Reflect the triangle given by points (2,2), (3,3), (3,1) with respect to the line $x=1$ using Homogeneous coordinates system. [6]
- Q.3(a) What is orthographic parallel projection? Describe different orthographic parallel projections. [6]
(b) Derive the expression for transformation as change in coordinate system. [6]
- Q.4(a) Describe different methods for spline specifications. [6]
(b) Describe various input devices used in computer graphics. [6]
- Q.5(a) Explain CMY color model. [6]
(b) Explain utilities of CIE Chromaticity diagram. [6]
- Q.6(a) Describe Z-buffer method for visible surface determination. [6]
(b) Describe BSP tree method for visible surface determination. [6]
- Q.7(a) Derive an expression for diffuse reflection implementation. [6]
(b) Explain Phong shading for polygon rendering. [6]

*****28.11.18*****M