

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION)**

**CLASS: BE
BRANCH: IT**

**SEMESTER: VII/ADD
SESSION : MO/2018**

SUBJECT : IT8039 COMPUTER GRAPHICS AND MULTIMEDIA

TIME: 1.5 HOURS

FULL MARKS: 25

INSTRUCTIONS:

1. The total marks of the questions are 30.
 2. Candidates may attempt for all 30 marks.
 3. In those cases where the marks obtained exceed 25 marks, the excess will be ignored.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. The missing data, if any, may be assumed suitably.
-

- Q1 (a) What is aspect ratio? Why it is required? [2]
(b) Provide a classification of different display devices. [3]
- Q2 (a) How many color combinations are possible for 8 bit encoding of each principle components in RGB color model system. [2]
(b) Describe working of CRT display. [3]
- Q3 (a) What is scan conversion? [2]
(b) Describe DDA line drawing algorithm. [3]
- Q4 (a) What are the features of circle drawing algorithm? [2]
(b) Describe boundary fill algorithm. [3]
- Q5 (a) What are the benefits of homogenous coordinate system? [2]
(b) Scale the quadrilateral given by the points (1,2), (3,1), (4,3), (2,4) by factors 2 along x axis and 3 along y axis respectively using homogenous coordinate system. [3]
- Q6 (a) Write down the transformation matrix for x axis shear in homogenous coordinate system. [2]
(b) Show window to viewport transformation in terms of basic transformations. [3]

:::: 18/09/2018 M :::::