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

CLASS: BE **SEMESTER : VII/ADD**
BRANCH: IT **SESSION : MO/18**

SUBJECT: IT8039 COMPUTER GRAPHICS AND MULTIMEDIA

TIME: 3:00 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.

Q.1(a)	Mentions different ways to express resolution.	[2]
Q.1(b)	Describe shadow mask method used in color displays.	[4]
Q.1(c)	What is video controller? Describe different architectures for raster system.	[6]
Q.2(a)	What is the disadvantage of DDA algorithm?	[2]
Q.2(b)	Describe scanline polygon fill algorithm.	[4]
Q.2(c)	Describe midpoint circle drawing algorithm.	[6]
Q.3(a)	What are the benefits of homogeneous coordinates system?	[2]
Q.3(b)	Show that two successive translations are additive nature in homogenous coordinate system.	[4]
Q.3(c)	Reflect the triangle with vertices (1,2), (2,5), (4,3) about an axis expressed by the line passing through points (0,2), (4,6) using homogeneous coordinates transformation.	[6]
Q.4(a)	Write down the steps for rotating an object about an axis parallel to any principle axis.	[2]
Q.4(b)	Illustrate 3-Dimensional viewing pipeline.	[4]
Q.4(c)	What is orthographic parallel projection? Describe different orthographic parallel projection.	[6]
Q.5(a)	Provide a suitable structure to capture polygon surfaces.	[2]
Q.5(b)	Illustrate various parametric continuity conditions.	[4]
Q.5(c)	Describe Beizer curves. What are advantages and disadvantages of Beizer curve?	[6]
Q.6(a)	What are different types of hidden surface detection method?	[2]
Q.6(b)	Explain utilities of CIE Chromaticity diagram.	[4]
Q.6(c)	Describe depth sorting method for visible surface determination.	[6]
Q.7(a)	List various uses of Multimedia.	[2]
Q.7(b)	Derive an expression for diffuse reflection implementation.	[4]
Q.7(c)	Describe Intensity interpolation shading for polygon rendering.	[6]

:::::10/12/2018:::::M