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Name:	A
Roll No.:	In Annual (Victoriality 2nd Explored
Invigilator's Signature :	

CS/M.Sc. (INFO. Sc)/SEM-3/MI-302/2012-13

2012 COMPUTER GRAPHICS & MULTIMEDIA

Time Allotted: 3 Hours Full Marks: 70

The figures in the margin indicate full marks.

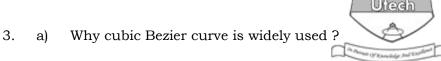
Candidates are required to give their answers in their own words as far as practicable.

Answer any *five* questions. $5 \times 14 = 70$

- 1. a) Define Refresh Rate.
 - b) Write different steps of Bresenham's Circle drawing algorithm.
 - c) Draw a line through the point (2,5) to (10,11) using Slope algorithm. 2+7+5
- 2. a) What is the importance of clipping?
 - b) Consider a clipping window where XL = 100, XR = 160, YB = 10, YT = 40. Fine the visible portion of the lone gh where g (120,20) and h(140,80).
 - c) Write functionality of CRT monitor. 3 + 7 + 2 + 2

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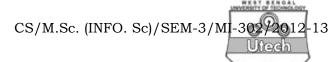
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- b) Write smoothly joining condition of two Bezier curve segments.
- c) Let Bo, B1, B2 and B3 are 4 control points of a Bezier curve. Find another 4 control pints of another Bezier curve which will join smoothly with the first one.
- d) Write application area of Bezier curve. 4 + 4 + 5 + 1
- 4. a) Find the new coordinate of a Rectangle ABCD after doubling the size while keeping in mind that the point A will be remain fixed after scaling. Here A (40,40), B (100,40), C(100,80), D(40,80).
 - b) Dtermine transformation matrix of rotation with respect to origin.
 - c) What are the differences between parallel projection and perspective projection? 7 + 5 + 2
- 5. a) Define Animation ? Briefly discuss the difference between Keyframe animation and Cell animation.
 - b) Explain the applications of Virtual Reality.
 - c) Differentiate between Vector and Rester graphics.
 - d) What are the characteristics of Multimedia system?

2 + 3 + 3 + 3 + 3

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- 6. a) What is MP3?
 - b) Explain MIDI file header format.
 - c) What are lossy and lossless compression techniques?
 - d) Write down the basic steps of MPEG encoding process with block diagram.
 - e) Define Hypertext and Hypermedia. 2 + 3 + 3 + 3 + 3
- 7. a) What is Real Time Streaming? Briefly discuss the video standards for Broadcasting signals.
 - b) Explain HSB colour model.
 - c) Why CMYK and RGB are called complementary colour model? 2 + 6 + 3 + 3

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