Seat No.: _____ Enrolment No._____

# GUJARAT TECHNOLOGICAL UNIVERSITY

**DIPLOMA ENGG.- VI$^{th}$ SEMESTER–EXAMINATION – MAY/JUNE- 2012**

**Subject code: 360705/2360705 Date: 30/05/2012**

**Subject Name: Computer Graphics and Multimedia**

**Time: 10:30 am – 01:00 pm Total Marks: 70**

## Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **English version is considered to be Authentic**

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| **Q.1** | (a) | What is Animation? Explain computer based animation. | **07** |
| | (b) | 1) Define the following terms.<br>1. Resolution 2. Window 3. Viewport 4. Pixel | **04** |
| | | 2) Explain graphics standards. | **03** |
| **Q.2** | | | |
| | (a) | Explain Boundary fill algorithm. | **07** |
| | (b) | Explain DDA line drawing algorithm. | **07** |
| | | **OR** | |
| | (b) | Explain Bresenham's line drawing algorithm. | **07** |
| **Q.3** | | | |
| | (a) | Explain Flood fill algorithm. | **07** |
| | (b) | Explain Mid-point circle algorithm. | **07** |
| | | **OR** | |
| **Q.3** | (a) | Explain parallel line algorithm. | **07** |
| | (b) | Explain 2D translation with example. | **07** |
| **Q.4** | | | |
| | (a) | Explain Cohen Sutherland line clipping algorithm. | **07** |
| | (b) | Explain perspective projection. | **07** |
| | | **OR** | |
| **Q. 4** | (a) | Explain Sutherland Hodgeman polygon clipping algorithm. | **07** |
| | (b) | Explain 2D rotation with example. | **07** |
| **Q.5** | | | |
| | (a) | Explain multimedia, Hypertext and Hypermedia. | **07** |
| | (b) | Explain image encoding for JPEG standard. | **07** |
| | | **OR** | |
| **Q.5** | (a) | Explain run length and Huffman data compression technique. | **07** |
| | (b) | Explain .jpeg, .bmp and .gif image formats. | **07** |

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| પ્રશ્ન–૧ | અ | Animation એટલે શું? Computer based Animation સમજાવો. | **07** |
| | બ | 1) નીચેની વ્યાખ્યાઓ સમજાવો. | **04** |
| | | 1. Resolution 2. Window 3. Viewport 4. Pixel | |
| | | 2) Graphics standards સમજાવો. | **03** |
| પ્રશ્ન–૨ | અ | Boundary fill અલગોરીધમ સમજાવો. | **07** |
| | બ | DDA line drawing અલગોરીધમ સમજાવો. | **07** |
| | | **અથવા** | |
| | બ | Bresenham's line drawing અલગોરીધમ સમજાવો. | **07** |
| પ્રશ્ન–૩ | | | |
| | અ | Flood fill અલગોરીધમ સમજાવો. | **07** |
| | બ | Mid-point circle અલગોરીધમ સમજાવો. | **07** |
| | | **અથવા** | |
| પ્રશ્ન–૩ | | | |
| | અ | Parallel line અલગોરીધમ સમજાવો. | **07** |
| | બ | 2D translation ઉદાહરણ આપી સમજાવો. | **07** |
| પ્રશ્ન–૪ | | | |
| | અ | Cohen Sutherland line clipping અલગોરીધમ સમજાવો. | **07** |
| | બ | Perspective projection સમજાવો. | **07** |
| | | **અથવા** | |
| પ્રશ્ન–૪ | | | |
| | અ | Sutherland Hodgeman polygon clipping અલગોરીધમ સમજાવો. | **07** |
| | બ | 2D rotation ઉદાહરણ આપી સમજાવો. | **07** |
| પ્રશ્ન–૫ | | | |
| | અ | Multimedia, Hypertext અને Hypermedia વર્ણવો. | **07** |
| | બ | JPEG standard માટે image encoding વર્ણવો. | **07** |
| | | **અથવા** | |
| પ્રશ્ન–૫ | | | |
| | અ | Run length અને Huffman data compression ટેકનિક વર્ણવો. | **07** |
| | બ | .jpeg , .bmp અને .gif image formats વર્ણવો. | **07** |

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