

**Krantiguru Shyamji Krishna Verma Kachchh University, Bhuj**  
**Master of Science (Computer Applications & Information Technology)**  
**Semester: VI**

|   |   |                         |
|---|---|-------------------------|
| <b>Paper Code:</b> CECS612                              |   | <b>Total Credit :</b> 4 |
| <b>Title of Paper:</b> Computer Graphics and Multimedia |   | <b>Total Marks :</b> 70 |
|   |   | <b>Time :</b> 3 Hrs     |
| <b>Unit</b>   |   |                         |
|   | <b>Description</b>  | <b>Weighting</b>        |
| <b>I</b>  | <b>Overview of Computer Graphics System:</b><br>A survey of Computer Graphics<br>Over View of Computer Graphics System<br>Video display devices<br>Raster Scan and random scan system<br>Input devices<br>Hard copy devices   | <b>20%</b>              |
| <b>II</b>   | <b>Output Primitives and Attributes</b><br>Drawing line, circle and ellipse generating algorithms<br>Scan line algorithm<br>Character generation – attributes of lines, curves and characters<br><b>Two Dimensional Graphics Transformation</b><br>Two dimensional geometric transformations<br>Windowing and Clipping<br>Clipping of lines | <b>20%</b>              |
| <b>III</b>  | <b>Three Dimensional Graphics Transformation</b><br>Three dimensional concepts – representations<br>Polygon table, Quadric surfaces, Splines, Besier curves and surfaces<br>Geometric and Modeling transformations<br>Viewing<br>Parallel and perspective projections.  | <b>30%</b>              |
| <b>IV</b>   | <b>Removal of Hidden Surfaces</b><br>Visible surface detection methods<br>Computer animation  | <b>10%</b>              |
| <b>V</b>  | <b>Multimedia</b><br>Introduction, Definition, Multimedia Hardware, Multimedia Software,<br>Multimedia Networking, Multimedia Application,<br>Multimedia Environments, Multimedia Computer Components,<br>Multimedia Standards, Multimedia PC.<br>Overview of latest multimedia software  | <b>20%</b>              |
| <b>Basic Text &amp; Reference Books :-</b>              |   |                         |
| <b>1.</b>   | Tay Vaughan, "Multimedia making it works", 4 <sup>th</sup> Edition Tata McGraw Hill Edition, 2000.  |                         |
| <b>2.</b>   | Hearn, D. and Pauline Baker, M., "Computer Graphics", 2nd Edition, Prentice Hall of India, 1995.<br>Sections: 1.1-1.8,2.1-2.3,2.5,2.6,3.1-3.7,3.11,3.14,4.1,4.2,4.5,5.1-5.5,6.1-6.7,9.1,9.2, 10.1-10.4, 10.6-10.8, 11.1-11.7, 12.1,12.3, 13.1-13.9, 13.12, 16.1-16.6)   |                         |
| <b>3.</b>   | Neuman, W.M., and Sproull, R.F., "Principle of Interactive Computer Graphics", McGraw Hill BookCo., 1979.   |                         |

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| <b>Unit</b>   | <b>Description</b>  | <b>Total Marks</b> |   |
| I   | Q.1 (A) Answer the Following.<br>(Definitions, Blanks, Full Forms, True/False, Match the Following) | 06                 | 14  |
|   | Q.1 (B) Medium / Long Questions. (With Internal Option)   | 08                 |   |
| II  | Q.2 (A) Answer the Following.<br>(Definitions, Blanks, Full Forms, True/False, Match the Following) | 06                 | 14  |
|   | Q.2 (B) Medium / Long Questions. (With Internal Option)   | 08                 |   |
| III   | Q.3 (A) Short / Medium Questions (With Internal Option)   | 06                 | 14  |
|   | Q.3 (B) Medium / Long Questions. (With Internal Option)   | 08                 |   |
| IV  | Q.4 (A) Short / Medium Questions (With Internal Option)   | 06                 | 14  |
|   | Q.4 (B) Medium / Long Questions. (With Internal Option)   | 08                 |   |
| V   | Q.5 (A) Short / Medium Questions (With Internal Option)   | 06                 | 14  |
|   | Q.5 (B) Medium / Long Questions. (With Internal Option)   | 08                 |   |