**POORNIMA UNIVERSITY, JAIPUR**

**END SEMESTER EXAMINATION, November 2022**

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|  | **2BT3157** | Roll No. | Total Printed Pages: 1 |
| **2BT3157** |  |
| B. Tech. II Year III- Semester (Main/Back) End Semester Examination, November 2022  **(CE)** | |
| **BCEECE3111 : Computer Graphics** | | | |

# Time: **3**Hours. Total Marks: **60**

Min. Passing Marks: **21**

Attempt **five** questions selecting one question from each Unit. There is internal choice from Unit I to Unit V. Marks of each question or its parts are indicated against each question / parts. Draw neat sketches wherever necessary to illustrate the answer. Assume missing data suitably (if any) and clearly indicate the same in the answer.

Use of following supporting material is permitted during examination for this subject.

# **1.--------------------------Nil--------------------** **2.------------------Nil-----------------------**

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|  |  | **UNIT-I (CO1)** | **Marks** | **Bloom Level** |
| **Q.1** | **(a)** | Describe about the Input devices used in computer graphics in detail. | **(6)** | **UNDERSTAND** |
|  |  |  |  |  |
|  | **(b)** | Explain Output devices and usages in computer graphics. | **(6)** | **UNDERSTAND** |
|  |  | **OR** |  |  |
| **Q.2** | **(a)** | Discuss about Graphics packages with example. | **(6)** | **UNDERSTAND** |
|  |  |  |  |  |
|  | **(b)** | Enumerate the image file format and its advantages and disadvantages. | **(6)** | **UNDERSTAND** |
|  |  | **UNIT-II (CO2)** |  |  |
| **Q.3** |  | Calculate the points and draw the line between starting coordinates (10,16) and ending co-ordinates (13,21) using Bresenham’s line drawing algorithm. | **(12)** | **APPLY** |
|  |  | **OR** |  |  |
| **Q.4** |  | By using Mid-point Circle Drawing Algorithm, for centre point coordinates (0,0) and radius as 10, generate all the points to draw a circle. | **(12)** | **APPLY** |
|  |  | **UNIT-III (CO3)** |  |  |
| **Q.5** | **(a)** | Find the transformed point, P’, caused by rotating P= (9, 3) about the origin through an angle of 90°. | **(6)** | **APPLY** |
|  |  |  |  |  |
|  | **(b)** | Find the transformed point, P’, after scaling of the point P(3, 3), by the scaling factors, Sx = 2, Sy = 3. | **(6)** | **APPLY** |
|  |  | **OR** |  |  |
| **Q.6** |  | Discuss about FIVE Geometric Transformations by its types with suitable example | **(12)** | **UNDERSTAND** |
|  |  | **UNIT-IV (CO4)** |  |  |
| **Q.7** |  | Find the part of below lines inside the Clipping window Using Cohen- Sutherland Line Clipping Algorithm.  Solved Explain Cohen-Sutherland Line Clipping Algorithm and | Chegg.com | **(12)** | **APPLY** |
|  |  | **OR** |  |  |
| **Q.8** |  | Window size is (6,10) and end points of line are (11,15) and (7,7). Find the visible portion of the line using Liang Barsky Line Clipping Algorithm | **(12)** | **APPLY** |
|  |  | **UNITV (CO5)** |  |  |
| **Q.9** |  | Compare the RGB color and CMY model. | **(12)** | **ANALYZE** |
|  |  | **OR** |  |  |
| **Q.10** |  | Distinguish the HSV color model and Conversion between HSV and RGB color model. | **(12)** | **ANALYZE** |