**Reg. No. \_\_\_\_\_\_\_\_**

**Karunya University**

**(Karunya Institute of Technology and Sciences)**

(Declared as Deemed to be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – Nov/Dec 2016**

**Semester: 2016 – 17 ODD**

**Subject Title: COMPUTER GRAPHICS Duration: 3 hrs**

**Subject Code: 09IT210 Max Marks: 100**

#### **Answer ALL questions**

**PART – A (10 x 1 = 10 MARKS)**

1. What do you mean by scan conversion?
2. What is homogeneous coordinate?
3. The pixel grid leads to jaggies or staircasing instead of straight lines, so called \_\_\_ effect.
4. Mention the disadvantage of applying odd parity rule for filling polygons.
5. Write the constructor used to generate the class Alpha.
6. Define interpolation.
7. Define shading.
8. Ray casting is \_\_\_\_\_\_ technique for visible surface determination.
9. What is Pulfrich effect?
10. What is virtual reality?

**PART – B (5 x 3 = 15 MARKS)**

1. Differentiate raster and vector graphics.
2. What is called antialiasing.
3. Define scenegraph with example.
4. Define back-face culling.
5. Define collision detection.

**PART – C (5 x 15 = 75 MARKS)**

1. Write the java 2D program and explain about the basic geometric objects in java 2D.

(OR)

1. a. Explain the typical applications and problems that can be solved using geometric transformation. (7)

b. In what ways, the elementary geometry transformation can be generated? (4)

c. What are the methods for composition available in the class AffineTransform? (4)

1. Define clipping. Write the four cases and explain the algorithm used for clipping lines.

(OR)

1. Explain the various types of colour models.
2. a. Explain about the meaning of each parameters used within the class Alpha with example. (10)

b. Explain the standard interpolators provided by java 3D. (5)

(OR)

1. Explain in detail the techniques used for the modeling of three dimensional objects.
2. Define image-precision algorithm and explain the techniques used in image-precision.

(OR)

1. Explain radiosity model.
2. Explain about the interaction in java 3D.

(OR)

1. What are the different types of sound? Explain the monocular and binocular factors of stereoscopic viewing.