**Karunya University**

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

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

**Supplementary Examinations – June 2016**

**Subject Title: Digital Compositing Time : 3 hours**

**Subject Code: 14MT2002 Maximum Marks: 100**

**Answer ALL questions (5 x 20 = 100 Marks)**

1. a. In digital compositing terms what is a “Plate”? (1)

b. Expand “CGI”. (1)

c. Define Depth of field. (2)

d. Normalize the pixel value (255, 255, 0) in a colour image having bitdepth of 8. (2)

e. With neat diagrams explain HSV and RGB colour system. (14)

**(OR)**

2. a. Expand HDRI. (1)

b. In video signals what does 4:2:2 stand for? (1)

c. Explain the working of Gamma correction operator. (2)

d. What is a LUT? (2)

e. Explain the working of Runlength encoding. (14)

3. a What is Channel swapping in compositing? (1)

b. Give an application of Sinc filter. (1)

c. Explain Mix operator. (2)

d. How does Invert function work? (2)

e. Explain the working of Edge detection, Median and Sharpening filters with their corresponding convolution filters? (14)

**(OR)**

4. a. What is the formula of Over operator? (2)

b. What is the Flip and flop in Digital compositing? (2)

c. What is a Matte image? (2)

d. Name and explain the Geometric transformations. (14)

5. a. How do you check the solidity of a Matte? (1)

b. What is Aspect ratio? (1)

c. Explain about the Screen operator in compositing. (2)

d. What are the disadvantages of Rotoscoping? (2)

e. Explain the process of morphing. Explain about edge Mattes. (10+4)

**(OR)**

6. a. What does Erosion and Dilation do in Matte processing? (1)

b. What is a Garbage Matte? (1)

c. What does “OUT” operation do? (2)

d. What is a Mask? (2)

e. Explain Colour Difference and Difference matte creation techniques in detail. (10+4)

7. a. What is a Proxy Image? (1)

b. Give some uses of tracking. (1)

c. Explain “Persistence of vision”. (2)

d. What is Optical flow analysis? Where is it used? (2)

e. Name and explain the various types of “UI” present in Compositing software. (14)

**(OR)**

8. a. What is a Histogram? Give its application. (2)

b. What are the characteristics a region should have to be chosen as a tracking feature? (4)

c. Name and explain the various film formats used in the Industry. (14)

**Compulsory:**

9. a. What is a sprite? (1)

b. What is Film Grain? (1)

c. Green vs Blue. Which is better for matte background? Justify. (4)

d. Explain the parameters a VFX Supervisor should make note of during production with regard to lighting and Camera. (14)