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III/IV B.Tech (Supplementary) DEGREE EXAMINATION**APRIL, 2017****Sixth Semester****Time:** Three Hours**Information Technology****Computer Animation****Maximum : 60 Marks***Answer Question No.1 compulsorily.*

(1X12 = 12 Marks)

Answer ONE question from each unit.

(4X12=48 Marks)

(1X12=12 Marks)

1. Answer all questions

- a What is assemble editing?
- b Write the code the for control track editing by SMPTE
- c Write the principles of computer animation.
- d Define degrees of freedom
- e Write about forward differencing
- f Define compound Transformations
- g What is Recursive Subdivision?
- h Name the 3D Shape Interpolation techniques.
- i What is Feature-Based Morphing?
- j Name the variants of Animation Languages.
- k What is Perspective Divide?
- l Name the rendering issues.

UNIT – I

- 2.a Write about geometric computations and numerical Integration Techniques 6M
- 2.b Write about implementation of Interpolation between representations (A1, 1) & (A2, 2) -angle, axis. 6M

(OR)

- 3.a Explain about computer animation Production tasks 6M
- 3.b Write about Basic Transformations and Ortho normalization 6M

UNIT – II

- 4.a Write about Transformations of display pipeline used to bring the object into screen space 6M
- 4.b Write about fixed and Euler angle representations used to show orientation. 6M

(OR)

- 5.a Write about digital Editing (linear & non linear) in detail 6M
- 5.b Write about Quaternion used to represent rotations in detail. 6M

UNIT – III

- 6.a Write about various techniques to compute arc length in controlling motion along a curve 6M
- 6.b Write about Interpolation of Rotations Represented by Quaternion and Camera Path Following 6M

(OR)

- 7.a Write about Graphical Languages used to represent an animation by a dataflow network 6M
- 7.b Write about Coordinate Grid Approach used in Morphing (2D) and Axial Slices in Morphing (3D) 6M

UNIT – IV

- 8.a Write about various Approaches to Animating the Face 6M
- 8.b Write about the Mechanics of Locomotion in walking 6M

(OR)

- 9.a Write about Modeling the Arm, The Hand, The Shoulder Joint in Reaching and Grasping 6M
- 9.b Write about Compositing with and without Pixel Depth Information in combining image layers. 6M