SIDDHARTH GROUP OF INSTITUTIONS ::PUTTUR
Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (DESCRIPTIVE)

Subject with Code: Computer Graphics and Animation (17IT606)

Course & Branch: B.Tech -CSIT

Regulation: R16

Year & Sem: III B.Tech & II Sem

UNIT-I

Introduction and Technical background

1. What is Computer Graphics? Write applications of computer graphics (10M)
2. a) Differentiate computer graphics and computer animation (5M)
   b) Discuss about Motion Perception (5M)
3. Explain in detail about Heritage of animation (10M)
4. Discuss about Animation Production in detail (10M)
5. Explain the following
   a) Digital editing (3M)
   b) Digital Video (3M)
   c) Digital Audio (3M)
6. Discuss in brief about history of computer animation (10M)
7. What is Display pipe line? Explain. (10M)
8. Explain the following
   a) Basic transformations (5M)
   b) Representing an arbitrary orientation (5M)
9. Discuss about
   a) How to extract transformations from a matrix? Discuss. (5M)
   b) Write description of transformations in the display pipe line (5M)
10. Describe in the brief about the following
    a) Error considerations (5M)

b) Basic transformations (5M)

UNIT –II

Interpolation basic techniques

1. Explain about the Interpolation (10M)
2. How to control the motion of a point along a curve? ` (10M)
3. Discuss the following
   a) Computer Arc length ` (5M)
   b) Interpolating Quaternions (5M)
4. Describe about the following
   a) Ease in/ ease-out (6M)
   b) Path following (4M)
5 What are Key frame systems? Explain (10M)
6. Write about Animation languages in detail (10M)
7. Explain the following
   a) Artistic oriented animation languages (5M)
   b) Graphical languages (5M)
8. Discuss about Deforming objects (10M)
9. Write about the following
   a) Picking and Pulling (5M)
   b) Deforming the embedding space (5M)
10. Explain the speed control and General distance time function (10M)

UNIT –III

Interpolation basic techniques

1. Explain in detail about 3 D shape interpolation (10M)
2. Discuss about Morphing (10M)
3. Explain the following
   a) Motion capture technologies (3M)
   b) Processing the images (3M)
   c) Camera Calibration (4M)
4. How to manipulate motion capture data? Explain (10M)
5. Explain about 3D Position reconstruction (10M)
6. Discuss the following
   a) Processing the signals (3M)
   b) Retarding the motion (3M)
   c) Combining motions (4M)
7. What is 2D? Discuss (10M)
8. Discuss about Three Dimensional shape interpolation (10M)
9. Explain the following
   a) Matching topology (3M)
   b) Star- shaped polyhedral (3M)
   c) Axial slices (4M)
10. Discuss the following
    a) Coordinate grid approach (5M)
    b) Feature based morphing (5M)

UNIT –IV

Modeling and Animating Human Figures and Facial Animation

1. Discuss about the overview or Virtual human representation (10M)
2. What is Reaching and Grasping? Explain (10M)
3. Explain in detail about Walking (10M)
4. Describe about Clothing and Hair coverings (10M)
5. Explain the following
   a) Anatomic structure (5M)
   b) The facial action coding system (5M)
6. What are the facial models? Explain (10M)
7. Discuss the following
   a) Parameterized models (5M)
   b) Blend shapes (5M)
8. Explain the following in animating the face
   a) Muscle models (5M)
   b) Expressions (5M)
9. Describe about Lip-sync function (10M)
10. What is Lip-Sync animation? Explain articulations of speech, phonemes and prosody (10M)

UNIT V

Behavioral Animation

1. Write about Behavioral Animation (10M)
2. Discuss the following
   a) Vision (5M)
   b) Memory (5M)
3. What are the primitive behaviors? Explain (10M)
4. Explain in detail about modeling intelligent behavior (10M)
5. Describe about the following
   a) Autonomous behavior (5M)
   b) Expressions and gestures (5M)
6. Explain in detail about Crowds. (10M)
7. Discuss about the following
   a) Modeling individuality (5M)
   b) Autonomous behavior (5M)
8. Describe the key features of behavioral animation (10M)
9. Explain the following
   a) Crowd behavior (3M)
   b) Managing n-squared complexity (3M)
   c) Appearance (4M)
10. Discuss the following
    a) Crowd control (4M)
    b) Internal structure (6M)

Prepared by: Dr. P. Ramesh babu , Professor, Department of CSIT, SIETK, Puttur.