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Programme UG/5TH/ UMCD501

2024

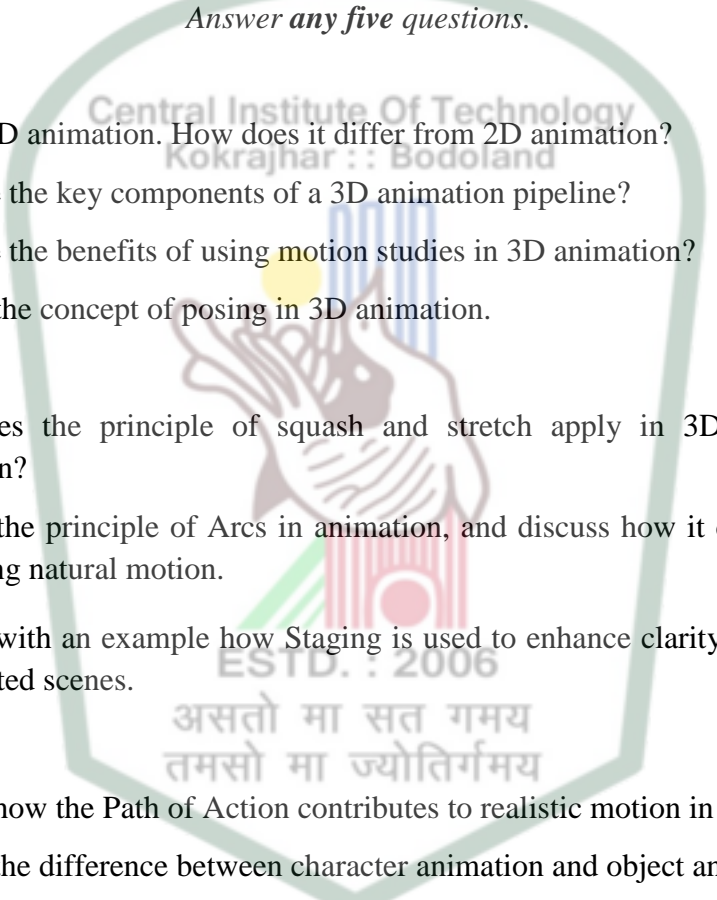
3D ANIMATION TECHNIQUE

Full Marks: 100

Time: Three hours

The figures in the margin indicate full marks for the questions.

Answer any five questions.

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1. a) Define 3D animation. How does it differ from 2D animation? 2+3
b) What are the key components of a 3D animation pipeline? 5
c) What are the benefits of using motion studies in 3D animation? 5
d) Explain the concept of posing in 3D animation. 5
2. a) How does the principle of squash and stretch apply in 3D character animation? 5
b) Explain the principle of Arcs in animation, and discuss how it contributes to creating natural motion. 5
c) Explain with an example how Staging is used to enhance clarity and focus in animated scenes. 6+4
3. a) Discuss how the Path of Action contributes to realistic motion in animation. 5
b) What is the difference between character animation and object animation? 5
c) Interpret the role of words, voice and body language in expressing a character's emotions in animation with examples. 6+4
4. a) What is facial expression? Evaluate the role of basic facial expressions and gestures in creating relatable characters with an examples. 4+6
b) Define lip-sync in animation and its role in character-driven storytelling. 2+8
5. a) Explain the following: 4x5=20

- i) The concept of blocking in animation.
 - ii) Phonemes with illustrations
 - iii) Graph editor and its tangents.
 - iv) Importance of silhouette in posing a character.
6. a) List some commonly used 3D animation software. Mention one feature unique to each. 4+6
- b) Analyse how the laws of physics influence motion studies in animation with examples. 6+4
7. a) Create a thumbnail sequence of the key poses for a character walking and then sitting on a chair. Include at least 10 frames. 10
- b) Illustrate how combination of basic body posture (open, closed, forward, backward) can be adapted for conveying different personalities of characters. 10

