



Brainware University
Barasat, Kolkata -700125

BRAINWARE UNIVERSITY

Term End Examination 2024-2025

Programme – B.Sc.(AM)-Hons-2020/B.Sc.(AM)-Hons-2021/B.Sc.(AM)-Hons-2022

Course Name – 3D Animation II

Course Code - BMMD601A

(Semester VI)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Identify in Autodesk Maya enables the user to link the movement of one object to the attributes of another, facilitating complex animation setups.
 - a) Rigging Wizard
 - b) Motion Tracker
 - c) Set Driven Key
 - d) Pose Library
- (ii) Choose the term that describes the process of refining animation by adding details and polishing movements.
 - a) Blocking
 - b) Anticipation
 - c) Clean-up
 - d) Arcs
- (iii) Identify the rigging technique used for controlling facial expressions.
 - a) IK Handles
 - b) Blend Shapes
 - c) Rig Constraints
 - d) Polygon Modeling
- (iv) Identify the primary use of Constraints in character rigging.
 - a) To control movement relationships
 - b) To change colors
 - c) To modify shaders
 - d) To improve textures
- (v) Select the best technique for making a character's feet stick to the ground in animation.
 - a) IK Handles
 - b) FK Controls
 - c) Blend Shapes
 - d) Lattice Deformers
- (vi) Choose the best method for refining facial animations.
 - a) Using Blend Shapes
 - b) Increasing mesh resolution
 - c) Modifying UVs
 - d) Adjusting camera focal length
- (vii) Point out the main advantage of using constraints in rigging.
 - a) Provides controlled movement
 - b) Reduces render time
 - c) Enhances texture resolution
 - d) Adjusts UV unwrapping
- (viii) Identify the main benefit of using Bifrost over traditional fluids.
 - a) Real-time simulation
 - b) Enhances texture mapping
 - c) Improves global illumination
 - d) Speeds up character rigging

- (ix) Choose the key aspect of creating a walk cycle in animation.
- a) Proper keyframe placement
 - b) Texture resolution
 - c) High-poly modeling
 - d) Adjusting camera angles
- (x) Choose the correct method to bind a character mesh to a skeleton.
- a) Using the Skin Bind Tool
 - b) Using the Extrude Tool
 - c) Using the Bevel Tool
 - d) Using the Paint Effects Tool
- (xi) Select the key difference between forward and inverse kinematics.
- a) FK controls rotation, IK controls position
 - b) FK works in the Graph Editor, IK works in Outliner
 - c) FK is for textures, IK is for animation
 - d) FK requires scripts, IK does not
- (xii) Choose the best technique for creating lip sync animation.
- a) Using Blend Shapes and phoneme keyframes
 - b) Adjusting UV coordinates
 - c) Increasing render samples
 - d) Modifying global illumination settings
- (xiii) Choose the primary function of an IK handle in Autodesk Maya.
- a) Creates inverse kinematics movement
 - b) Modifies shading properties
 - c) Improves mesh topology
 - d) Adjusts scene lighting
- (xiv) Identify the purpose of the Pole Vector Constraint in IK rigs.
- a) Controls the bending direction of an IK chain
 - b) Adjusts material properties
 - c) Enhances render quality
 - d) Modifies UV mapping
- (xv) Select the correct tool to adjust joint orientations in rigging.
- a) Joint Orient Tool
 - b) Extrude Tool
 - c) Hypershade
 - d) UV Editor

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Write a short note on blend shapes in Autodesk Maya. (3)
3. Write a short note on the purpose of joint parenting. (3)
4. Describe the difference between single-chain and rotate-plane IK solvers. (3)
5. Describe how constraints help in character animation. (3)
6. Analyze the difference between IK and FK in rigging. (3)

OR

Illustrate about the role of secondary motion in animation. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Analyze how the principle of timing affects the perception of weight and emotion in animation. (5)
8. Describe the function of the Graph Editor in refining animation curves in Autodesk Maya. (5)
9. Write the process of setting up a basic character rig in Autodesk Maya. (5)
10. Describe the key principles involved in creating a character's walk cycle. (5)
11. Write the steps to mirror joints in Autodesk Maya. (5)
12. Describe the function of Blend Shapes in facial animation. (5)

OR

Describe the purpose of mirroring weights in Autodesk Maya. (5)
