



BRAINWARE UNIVERSITY

Term End Examination 2025-2026

Programme – M.Sc.(AM)-2021/M.Sc.(AM)-2022/M.Sc.(AM)-2023/M.Sc.(AM)-2024

Course Name – Advanced Animation and CG Production-3d/Advanced Animation and
CG Production - 3d

Course Code - MMM402A-II/MMM402AII
(Semester IV)

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) Recognize the importance of timing in animation.

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|--------------------------------------|--|
| a) Timing is irrelevant in animation | b) Timing determines the speed and rhythm of movements |
| c) Timing only affects rendering | d) Timing is primarily used in sound editing |

(ii) Select the term that refers to the principle of "ease in" and "ease out" in animation.

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|-----------------|-----------------------|
| a) Arcs | b) Overlapping action |
| c) Anticipation | d) Timing and spacing |

(iii) Select the primary advantage of using blend shapes in facial rigging.

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|--|---|
| a) They simplify the animation process | b) They allow for precise control over facial movements |
| c) They control the character's body movements | d) They speed up the rendering time |

(iv) Identify the appropriate tool to add gravity to a Maya N-particle system.

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|---------------------|------------------------|
| a) Attribute Editor | b) Relationship Editor |
| c) Nucleus Node | d) Gravity Field |

(v) Recognize the role of a particle emitter in Maya.

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|--------------------------------------|------------------------------------|
| a) It emits light rays for rendering | b) It emits particles into a scene |
| c) It controls texture mapping | d) It manipulates polygon |

(vi) Identify the hierarchy structure that ensures proper deformation of joints in rigging.

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|----------------------|------------------------------|
| a) Random Linking | b) Parent-Child Relationship |
| c) Linear Dependency | d) Unorganized Rig |

(vii) Choose the best technique to control a character's facial expressions in Maya.

- | | |
|---------------------|-----------------|
| a) Cluster Deformer | b) Blend Shapes |
|---------------------|-----------------|

- c) IK Rigging
(viii) Select the most efficient way to mirror a skeleton in Maya.
a) Duplicate Special
c) Transform Constraints
(ix) Indicate the tool used to apply smooth transitions between key poses.
a) Blend Shapes
c) Graph Editor
(x) Identify the feature in Maya used to create facial expressions by morphing between different shapes.
a) Motion Path
c) Lattice Deformer
(xi) Select the Maya tool that allows you to write custom scripts to control animation behavior.
a) Expression Editor
c) Graph Editor
(xii) Select the Maya feature that allows direct mathematical expressions to modify attributes.
a) Set Driven Key
c) Blendshapes
(xiii) Identify which editor in Maya is best for manually defining custom attribute relationships.
a) Expression Editor
c) Dope Sheet
(xiv) Choose the correct tool to animate the stretching of a character's mouth dynamically.
a) IK Handles
c) Blendshapes
(xv) Select the Maya editor where attributes of different objects can be connected without writing expressions.
a) Connection Editor
c) Expression Editor
- d) Parenting
b) Mirror Joints
d) Connection Editor
b) Timeline
d) Constraints
b) Blendshapes
d) Set Driven Key
b) Time Slider
d) Blendshapes
b) Expression Editor
d) Connection Editor
b) Graph Editor
d) Set Driven Key
b) Set Driven Key
d) Skeleton Constraints
b) Graph Editor
d) Dope Sheet

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Summarize the difference between Parent Constraint and Point Constraint. (3)
3. Explain the concept of character body mechanics and weight shifts in Maya animation. (3)
4. Describe the function of point constraints in Maya. (3)
5. Express the importance of character walk cycles in animation. (3)
6. Explain the importance of facial rig animation in character performance. (3)

OR

- Express the role of secondary animation in enhancing character performances. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Explain how you would use an Aim Constraint to rig a spotlight in a scene. (5)
8. State the importance of Maya in the field of 3D animation and its significance in modern animation pipelines. (5)
9. Explain how IK (Inverse Kinematics) and FK (Forward Kinematics) can be used together to rig a character's arm. (5)
10. Classify some challenges associated with using blend shapes for facial expressions. (5)
11. Illustrate how MASH can be used to animate objects along a curve. (5)
12. Express some current trends and innovations in the use of fluid, hair, cloth, FX, and particle effects in visual effects and animation. (5)

OR

Compose a short essay on the role of particle effects in creating convincing special effects for film and video games. (5)

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