17227

# BRAINWARE UNIVERSITY



## Term End Examination 2025-2026
## Programme – B.Sc.(AM)-Hons-2023
## Course Name – 3D Modelling and Look Dev
## Course Code - BAM50116
## ( Semester V )

**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 the primary axis used to determine depth in a 3D model in Maya.
a) X-axis b) Y-axis
c) Z-axis d) W-axis

(ii) Choose the most appropriate planning phase when designing a complex 3D model in Maya.
a) Rigging the model first b) Sketching the concept on paper
c) Applying textures to the model d) Exporting the model to other software

(iii) Locate the tool in Maya used primarily for creating depth in a flat plane.
a) Move Tool b) Extrude Tool
c) Rotate Tool d) Scale Tool

(iv) Identify the component in Maya that defines the corner points of a polygon.
a) Edge b) Vertex
c) Face d) UV

(v) Choose the correct action when you want to create a sharp crease along an edge in Maya.
a) Subdivide the edge b) Delete the edge
c) Add supporting edge loops d) Apply a bevel

(vi) Select the option that allows you to isolate the selected object in the viewport.
a) Ctrl + I b) Shift + I
c) V d) X

(vii) Locate the option in Maya to apply smooth shading to a polygonal object.
a) Mesh > Smooth b) Modify > Smooth
c) Edit Mesh > Smooth d) Polygon > Smooth

(viii) Identify the tool that allows you to bridge two edge loops together in Maya.
a) Append to Polygon Tool b) Bridge Tool
c) Merge Tool d) Fill Hole Tool

(ix) Identify the UV mapping type used to unwrap a soda can in Maya.

a) Cylindrical UV Mapping
b) Planar UV Mapping
c) Spherical UV Mapping
d) Automatic UV Mapping

(x) Locate the process that cut a cube UV from all six sides at a same time.

a) Automatic UV Mapping
b) Cylindrical UV Mapping
c) Planar UV Mapping
d) Camera UV Mapping

(xi) Choose the shader attribute that can be adjusted to make a surface appear more metallic.

a) Roughness
b) Metallic
c) Specular
d) Reflectivity

(xii) Select the type of 3D texture used to generate random patterns like noise or marble in Maya.

a) Granite
b) Leather
c) Marble
d) Fractal

(xiii) Identify the type of light that is best for simulating a single-point light source like a bulb.

a) Spot Light
b) Point Light
c) Directional Light
d) Area Light

(xiv) Identify the rendering engine in Maya that supports both CPU and GPU rendering.

a) Arnold Renderer
b) Vector Renderer
c) Maya Software Renderer
d) Hardware Renderer

(xv) Select the light type that is typically used to simulate lighting from a television or monitor.

a) Area Light
b) Directional Light
c) Ambient Light
d) Spot Light



## Group-B

(Short Answer Type Questions) 3 x 5=15

2. Summarize the importance of topology in 3D modeling. (3)
3. Summarize the importance of edge flow in creating a smooth 3D model. (3)
4. Illustrate how to use the Multi-Cut Tool for complex modeling tasks in Maya. (3)
5. Discuss the steps to use the "Mirror Geometry" tool in Maya. (3)
6. Describe the significance of Exposure control in Arnold lights. (3)

**OR**

Summarize the use of Mesh lights in Arnold. (3)

## Group-C

(Long Answer Type Questions) 5 x 6=30

7. Describe the process of beveling edges in Maya and explain how it enhances the realism of a polygonal model. (5)
8. Describe the purpose of using ambient occlusion in Maya with Arnold, and how does it enhance the final render? (5)
9. Explain the difference between point lights and directional lights in Maya. (5)
10. Explain how to achieve realistic reflections in Maya using the reflection attributes of materials and lights. (5)
11. Describe how the "Extrude" tool can be effectively used to model various parts of a weapon, such as the barrel or grip. (5)
12. Describe the process of UV unwrapping in Maya and its impact on texture quality. (5)

**OR**

Describe the role of displacement maps in Maya and how they differ from bump and normal maps. (5)