

Total No. of printed pages = 6

END SEMESTER EXAMINATION – 2019

Semester : 5th

Subject Code : AMT-502

CG LIGHTING AND RENDERING

Full Marks –70

Time – Three hours

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

Instructions :

1. Questions on PART – A are compulsory.
2. Answer any *five* questions from PART – B.
3. Illustrate your answers with suitable sketches and examples wherever necessary.

PART – A

Marks – 25

1. Fill in the blanks : 1×10=10
 - (a) In order to 'Set Project' in Maya one needs to follow _____ menu bar.

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- (b) To switch on 'Maya Mental Ray' render setting one need to go to Plug-In-Manager and need to switch on _____.
- (c) To generate shadow there is two options in Maya 2011 one is called Depth Map Shadows and another one is _____.
- (d) In order to reduce amount of graininess or noise in Ray Trace shadow you need to increase the value of _____.
- (e) The default value of Maya spot light intensity is _____.
- (f) The key combination to open new scene in Autodesk Maya is _____.
- (g) The default value of a Blinn material Specular Roll Off is _____.
- (h) Reduce the value of _____ attribute in Ray Trace Shadow will sharpen the shadow.
- (i) In Maya Render Setting image size HD 720 height is 720 and width is _____.
- (j) Increasing the value of _____ attribute in Depth Map Shadow will soften the shadow.



2. Write true or false :

1×10=10

- (a) The Key Light creates the subject's main illumination, and defines the most visible lighting and shadows.
- (b) Directional light does not have Ray Trace shadow option.
- (c) Specular Roll Off value can be changed based on material properties.
- (d) Maya default lights are located under Mesh menu in Maya.
- (e) Lambert is a shiny material that is particularly effective at simulating metallic surfaces (for example, brass or aluminium).
- (f) Through Hypershade you can build shading networks by creating, editing, and connecting rendering nodes.
- (g) There is an option called 'Keep' in Maya render view which helps us to save render sequence.
- (h) The key combination to create shortcuts in the selves is Alt+ Shift+ left mouse button click.

- (i) Increase render size in Maya takes less time to render.
- (j) Penumbra Angle fall off at edge of cone angle more gives a softer edge to the light cone.

3. Choose the correct answer : 1×5=5

- (a) Outliner is located under
 - (i) Windows menu
 - (ii) Create menu
 - (iii) Mesh menu
 - (iv) Display menu
- (b) Which is not Maya default light ?
 - (i) Ambient
 - (ii) Directional
 - (iii) Photometric
 - (iv) Volume
- (c) Maya Layer Editor used to
 - (i) Arrange UV mapping
 - (ii) None of them
 - (iii) Organize shading network
 - (iv) There is nothing called Layer Editor in Maya.



- (d) Specular Roll Off helps us to
 - (i) Edit shiny/specular value of the material
 - (ii) Specular Roll Off can be adjustable
 - (iii) Specular Roll value can be changed based on material properties
 - (iv) All of them

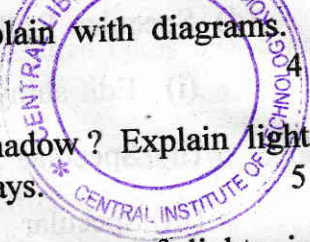
- (e) Which material is used for representing matt surface ?
 - (i) Lambert
 - (ii) Blinn
 - (iii) Phong
 - (iv) Anisotropic.

PART - B

Marks - 45

- 4. (a) Describe what is Maya Hypershade. 4
- (b) What are the properties of natural light ? Describe them briefly with examples. 5
- 5. (a) What is Material Attribute Editor in Autodesk Maya ? 3
- (b) What is Caustic and Global illumination ? 6



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6. (a) What is shadow? Explain with diagrams. 4
(b) What is Ray Trace shadow? Explain light radius and shadows rays. 5
7. (a) What are the different types of lights in Autodesk Maya? Explain with diagram. 6
(b) What is ambient occlusion in Maya? 3
8. What do you mean by Maya 3-point light? Explain 3-point lighting technique with examples. 9
9. (a) Explain how Blinn material is different from Lambert material. 4
(b) What is importance of lighting in production to achieve final output? 5
10. Write short notes on any three : 3×3=9
(i) Maya outliner
(ii) Light-linking
(iii) Material attribute editor in Maya.