



PAC INSTITUTE OF TECHNOLOGY AND SOCIAL STUDIES
May - August 2025 ASSESSMENT

FORMATIVE ASSESSMENT

Qualification / Course : Animation Digital Media Level 6

Unit of Competency : LIGHT AND RENDER 3D SCENES

WRITTEN ASSESSMENT

TIME: 3 HOURS

INSTRUCTIONS TO THE CANDIDATE:

- 1. Read all the instructions carefully before attempting the questions.*
- 2. This paper consists of two sections, A & B.*
- 3. You are allowed 3 Hours to Answer the questions.*
- 4. Marks for each question are indicated in brackets.*
- 5. Write your responses in the Separate Answer booklet provided.*
- 6. Do not write anything on this question paper.*

SECTION A: (40 MARKS)

*Answer **ALL** questions in this section.*

1. Define rendering in the context of 3D animation and digital media. (2 Marks)
2. Name FOUR main purposes of rendering in 3D production. (4 Marks)
3. List FOUR key components that make up the rendering process. (4 Marks)
4. Name FOUR popular render engines used in 3D animation. (4 Marks)
5. List FOUR 3D software packages and their default render engines. (4 Marks)
6. Name the FOUR fundamental properties of light in 3D rendering. (4 Marks)
7. Outline FOUR roles of lighting in creating mood and atmosphere. (4 Marks)
8. List the key differences between practical and motivated lighting. (4 Marks)
9. Name FOUR standard camera views used for lighting evaluation. (4 Marks)
10. Highlight FOUR key render settings that affect lighting quality. (4 Marks)
11. Define multi-camera setup in 3D lighting testing. (2 Marks)

SECTION A: (60 MARKS)

*Answer **any three** questions in this section.*

Question 12

- a) Compare the advantages and disadvantages of CPU vs GPU render engines. (10 Marks)
- b) Contrast real-time rendering engines with offline rendering engines in terms of quality and speed. (10 Marks)

Question 13

- a) Analyze the factors that influence the choice of render engine for a specific project. (8 Marks)
- b) Differentiate between integrated and third-party render engines. (4 Marks)
- c) Interpret system requirements for different render engines and their performance implications. (8 Marks)

Question 14

- a) Explain how lighting affects the perception of form, space, and texture in 3D scenes. (6 Marks)
- b) Describe the psychological impact of different lighting scenarios on viewers. (4Marks)
- c) Analyze the relationship between lighting and material properties in rendering. (4 Marks)
- d) Interpret how cultural and contextual factors influence lighting design choices. (6 Marks)

Question 15

- a) Explain how different camera angles reveal different aspects of lighting quality. (8 Marks)
- b) Describe the strategic placement of cameras to identify lighting problems. (6 Marks)
- c) Analyze the relationship between camera settings and lighting evaluation accuracy. (6 Marks)