



PAC INSTITUTE OF TECHNOLOGY AND SOCIAL STUDIES SEPTEMBER – DECEMBER 2025 ASSESSMENT

FORMATIVE ASSESSMENT

Course : ANIMATION AND DIGITAL MEDIA
Level : 6
Unit of Competency : 3D CHARACTER MODELLING

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 a character bible in 3D animation. (2 marks)
2. List any THREE components of a character profile. (3 marks)
3. Identify TWO key elements considered in a character theme and style. (2 marks)
4. Name any TWO-3D modelling software commonly used in character development. (2 marks)
5. State TWO advantages of using edge loops in 3D character modelling. (2 marks)
6. Record any FOUR types of character views required in T-pose setup. (4 marks)
7. List any THREE modelling techniques used in developing 3D characters. (3 marks)
8. Identify TWO functions of the UVW unwrap modifier in character texturing. (2 marks)
9. Define the term topology in 3D modelling. (2 marks)
10. Name any THREE types of texture maps applied in 3D character creation. (3 marks)
11. State TWO reasons for refining a mesh model before animation. (2 marks)
12. List any THREE materials used in character facial detailing. (3 marks)
13. Identify TWO colour schemes suitable for character costume design. (2 marks)
14. Define the term planar mapping in texture unwrapping. (2 marks)
15. Name TWO methods used to create 3D rig systems. (2 marks)

SECTION B: (60 MARKS)

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

16. You have been hired as the lead character artist for a new 3D animated TV series set in a futuristic African city. Before production begins, the studio requires you to fully document the main character and prepare them for modeling and animation. To ensure the character remains consistent throughout the series and can be accurately rigged and animated, you must create all the necessary reference documents and poses used by the modeling team.

- a) Explain the process of developing a character bible, highlighting its importance in 3D character creation. (10 Marks)
- b) Describe the step-by-step procedure for setting up a character T-pose, indicating how each view contributes to the final model accuracy. (10 Marks)

17. You are working as a 3D character artist for a game development studio creating a high-action-adventure game. One of your tasks is to prepare a main playable character who will perform complex movements such as running, jumping, fighting, and interacting with the environment. To ensure the character looks realistic and performs smoothly during gameplay, you must focus on both the structural design of the model and the surface details that bring it to life.

- a) Analyse the principles of good topology in 3D character modelling. (10 Marks)
- b) Differentiate between bump maps, skin maps, and hair maps. (10 Marks)

18. You have been assigned as the lead 3D artist on an animated short film where the main character needs to perform a wide range of actions—from subtle facial expressions to complex body movements like running, jumping, and lifting objects. To achieve this, you must choose appropriate modelling techniques and pair them with suitable rigging methods so that the animator can work smoothly without technical limitations.

a) Discuss the relationship between modelling techniques and character rigging methods. (10 Marks)

b) Explaining how they influence animation flexibility. (10 Marks)

19. Examine TEN roles of colour schemes and costume design in enhancing the personality and visual identity of a 3D character. (20 marks)