Total number of printed pages: 2 **Programme(DIP/4th/DAMT402)**

2025

Concept of Rigging

Full Marks: 100

Time: Three hours

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

*Answer **any five** questions.*

1.	**a)**	**Answer the following questions -**	**5 x 2=10**
	i)	Define the term "pivot point" in rigging.	
	ii)	What is a parent-child relationship in a rig hierarchy?	
	iii)	Name any two types of nonlinear deformers used in rigging.	
	iv)	Differentiate between parent constraint and point constraint in Maya.	
	v)	What is a blend shape deformer?	
	b)	What are Constraints? Name and describe any three types of constraints.	**4+6**
2.	**Answer the following questions -**		**4x5=20**
	i)	Describe the importance of studying anatomy for character rigging.	
	ii)	Explain the role of skeletons and joints in the character rigging process.	
	iii)	Describe the setup of IK handles for leg movement in a character.	
	iv)	What is the purpose of weight painting in skinning?	
3.	**Explain the following:**		**4x5=20**
	i)	IK Handle Tool and its use	
	ii)	RP and SC solvers in Maya.	
	iii)	The purpose and benefits of Freeze Transformation in Maya.	
	iv)	The process of adding attributes in Maya with an example.	

4	**a)**	What is a Set Driven Key in Maya? Explain its function with one practical example from character rigging.	4+6
	b)	How do deformers help in getting realistic movement? Explain about lattice and jiggle deformers in Maya with illustrations.	4+6
5.	**a)**	Define FK and provide an example of its use in character animation.	4+6
	b)	What is IK? How does it make animating characters easier?	4+6
6.	**a)**	What is skinning in Maya? Why is it important in character rigging?	5+5
	b)	Briefly explain the process of binding a skin to a skeleton in Maya. What is dual linear skinning?	5+5
7.	Explain how to create an intuitive and flexible character bone set up and rig for a human hand based on the following description.		
	i)	Creating bone set up and labelling the joint hierarchy and control curves.	6
	ii)	Creating the humanoid arm rig with IK/FK switching.	6
	iii)	Explain how the rig allows flexible movement.	8

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