

INDIRA TECHNICAL EDUCATION SOCIETY, NASHIK

CERTIFICATE COURSE 3D MAX

EXAM SCHEME: THEORY PAPER 100 MARKS – 3 HRS.
PRACTICAL 100 MARKS – 2 HRS.

[3D MAX / D-CAD – II]

THEORY SYLLABUS

Topic I

Introduction : Coordinate Systems in 3ds Max, Layers, Settings and Startup Configuration, Basic Lofting Concepts

Fine-Tuning Productivity Via the 3ds Max Interface : Using the Align Tool and Transform Gizmos

Topic II

Basic Modeling : Setting Up a Scene, Working with 2D Shapes, Cloning Objects and Using More Modifiers, Using Align Tools to Assemble the Building

3D Modeling : Applying Modifiers to 3D Primitive Objects, Using Lofting to Create 3D Objects, Controlling Lofted Objects Using the Linked XForm Modifier, Box Modeling

Cameras : Camera Basics, Scene Composition

Basic Lighting : Painting with Light, Using Sunlight to Calculate Shadows, Using Omni Lights to Simulate Bounced Light

3D Lighting : Attenuating Light Using Standard Omni Lights, Adding Spotlights to the Scene for Accent, Adjusting Shadow-Mapped Shadows, Simulating Shadows Using Projector Maps, Projecting Maps for Efficiency

Topic III

Rendering : Rendering Options, The Render Scene Dialog, The Rendered Frame Window, Rendering for Animations, Rendering for Print Output

Creating Convincing Materials : The Material Editor: Interactive Editing, Specular Highlights, Creating Patterned Materials, Using Mapping Coordinates to Size Maps, Creating the Illusion of Geometry Using Bump Maps, Generating Reflections in Materials

3D Materials : Masking Techniques, Applying the Mask Map Type, Assigning Materials to Objects at Face Level, Material Libraries: A Management Tool

Global Illumination : Simulating Bounced Light Using Global Illumination, Radiosity Rendering, Radiosity Meshing Parameters, Exposure Control, Radiosity Solution Refinement, Materials for Radiosity Rendering

Basic Animation : About Keyframe Animation, Set Key Animation Mode, The Track View–Dope Sheet

3D Animation : Animating Using Controllers and Constraints, Using Hierarchical Linking for Extra Control, Using the Track View–Curve Editor

Effects : Atmospheric Effects, Adjusting Particle Flow Effects,

Topic IV

Simplified Animation Using Inverse Kinematics : Understanding Inverse Kinematics, Using Interactive IK, Animating with the HI Solver

Dynamics and Scripting : Using Reactor to Simulate Collision Dynamics, Rigid Body Dynamics, Simulating Cloth, MAX Script Routines

Scene Assembly : The Asset Browser, Selective Merging, Compositing Rendered Scenes

GUIDELINE FOR PAPER SETTER

Q. 1 : Compulsory and objective type 20 marks.

Q. 2 to Q. 7 : Candidate has to solve any Five out of these six 16 marks each

WEIGHTAGE

RECOMMENDED TEXT

