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Paper Code: B.Sc(ANI)-401

C (SVSU:2024-25/R)

Enrollment No.

B.SC ANIMATION

4th SEM /2nd YEAR

SUBJECT NAME: 3D PRODUCTION

SUBJECT CODE: BSC-ANI-401

[Time : 3:00 Hours]

[Max. Marks : 75]

I Long Questions: Attempt any three questions. (10X3=30)

1. Suggest few software used for 3D modeling and provide a short explanation of each.
2. Describe polygonal modeling in 3D design. How do vertices, edges, and faces form a 3D model? Provide an example of how this technique is used to create basic shapes.
3. List and explain any five key roles in a 3D production team.
4. Illustrate the use of 3DS Max in 3D modeling. What is it and why it is used?
5. Explain the process of compositing in post-production, including the tools and techniques used. Discuss the role of layering, keying, and rotoscoping in achieving seamless integration of visual elements.

II Short Questions: Attempt any five questions. (5X5=25)

1. Analyze three-point lighting in 3D production, and how does it create a balanced and dynamic composition? Explain the function of the key light, fill light, and backlight in this setup.
2. Write down a short note on Texturing in 3D Production.
3. Evaluate the emerging trends in 3D production, such as Virtual Reality (VR), Augmented Reality (AR), and Artificial Intelligence (AI)? Discuss their effects on the 3D production process and how they are transforming the industry.
4. What are the key aspects of asset design in 3D production?
5. Explain the role of the 3D modeling artist in the production process. How does their work influence the overall quality of the final product?
6. Describe Photoshop as a tool, its interface components, and the reasons it is widely used in graphic design.
7. Discuss the significance of storyboarding in 3D production.

III Very Short Questions: Attempt all questions. (2X5=10)

- 1 What is the process of assigning weights to vertices for proper deformations in animation?
- 2 What is the process of creating character movement in 3D animation called?
- 3 Which software is commonly used for professional storyboarding in animation?
- 4 Expand the term VFX used in 3D production.
- 5 What is skinning?

IV Multiple Choice Questions: Attempt all questions. (1X10=10)

1. Which file format is commonly used for 3D models?
a) .mp3 b) .obj c) .docx d) .pdf
2. Which artist is responsible for adding skeletons and control systems to 3D models?
a) Texture Artist b) Animator
c) Rigging Artist d) Technical Artist
3. What is the purpose of rendering in 3D production?
a) Sculpting models b) Applying skeletons
c) Generating final images d) Editing sound
4. What does a project manager oversee?
a) Character animation b) Texturing details
c) The entire 3D production process d) Rigging characters
5. What is the main goal of a compositor?
a) Model 3D objects b) Animate characters
c) Optimize textures
d) Combine visual elements into a final scene
6. In which stage of 3D production is the final product polished through compositing and editing?
a) Pre-production b) Production
c) Post-production d) Rendering
7. Which type of map controls the shininess and reflectivity of a 3D model's surface?
a) Bump Map b) Normal Map
c) Specular Map d) Diffuse Map
8. Which type of light source emits light in all directions from a single point in space?
a) Directional Light b) Point Light
c) Spotlights d) Area Light
9. Which technique in animation involves setting specific positions or attributes at key moments in time?
a) Motion Capture b) Procedural Animation
c) Keyframe Animation d) Rigging
10. Which of the following is NOT a render pass used in 3D rendering?
a) Diffuse Pass b) Reflection Pass
c) Motion Blur Pass d) Shadow Pass

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Paper Code: B.Sc-(ani)-401CC14 A (SVSU:2024-25/R)

Enrollment No.

B.SC ANIMATION

4th SEM /2nd YEAR

SUBJECT NAME: HISTORY OF 3D GRAPHICS

SUBJECT CODE: B.SC-(ani)401CC14

[Time : 3:00 Hours]

[Max. Marks : 70]

I Long Questions: Attempt any three questions.

(10X3=30)

1. Explain the role of industry-standard 3D software like Maya, 3ds Max, and Blender in professional production environments. Compare their primary uses and features.
2. Describe polygonal modeling in 3D design. How do vertices, edges, and faces form a 3D model? Provide an example of how this technique is used to create basic shapes.
3. List and explain any five key roles in a 3D production team.
4. Illustrate the use of 3DS Max in 3D modeling. What is it and why it is used?
5. Explain the process of ray tracing in 3D rendering. How does it simulate realistic lighting, and what role does it play in generating reflections, refractions, and shadows in a scene?

II Short Questions: Attempt any five questions.

(5X5=25)

1. What is 3D Modeling? Explain few 3D modeling techniques commonly used.
2. Analyze three-point lighting in 3D production, and how does it create a balanced and dynamic composition? Explain the function of the key light, fill light, and backlight in this setup.
3. Write down a short note on Texturing in 3D Production.
4. What are the key aspects of asset design in 3D production?
5. Explain the role of the 3D modeler in the production process. How does their work influence the overall quality of the final product?
6. What is the role of visual effects (VFX) in post-production? Explain the different techniques used in VFX, including particle effects and simulations.
7. What are the emerging trends in 3D production, including Virtual Reality (VR), Augmented Reality (AR), and Artificial Intelligence (AI)? Discuss their impact on the 3D production process and how they are changing the industry.

III Very Short Questions: Attempt all questions.

(2X5=10)

- 1 Which type of light creates a focused, cone-shaped beam?
- 2 What is the process of creating character movement in 3D animation called?
- 3 Which software is commonly used for professional storyboarding in animation?
- 4 What does VFX stand for in 3D production?
- 5 What term refers to the process of combining multiple visual elements into one cohesive scene?

IV Multiple Choice Questions: Attempt all questions.

(1X5=5)

1. Shortcut key for scaling in 3DS Max
 - a) Q
 - b) W
 - c) E
 - d) R
2. Which software is widely used for editing and post-processing, especially in video production?
 - a) Nuke
 - b) Adobe Premiere Pro
 - c) V-Ray
 - d) Logic Pro
3. Which of the following techniques is used to simulate real-world phenomena, like fire or smoke, in visual effects?
 - a) Motion Graphics
 - b) Particle Effects
 - c) Rotoscoping
 - d) Keying
4. In which stage of 3D production is the final product polished through compositing and editing?
 - a) Pre-production
 - b) Production
 - c) Post-production
 - d) Rendering
5. Which type of map controls the shininess and reflectivity of a 3D model's surface?
 - a) Bump Map
 - b) Normal Map
 - c) Specular Map
 - d) Diffuse Map
