

**TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES**  
**NAMED AFTER MUHAMMAD AL-KHOREZMI**  
**Department of Television Media Technologies**  
**The 2024-2025 academic year is the fall semester**  
**Final control in the discipline “Basics of virtual reality”**

1. What Is Virtual Reality?
2. Testing the boundaries in VR.
3. Topics of Health and safety in VR.
4. What is Modern VR Experiences?
5. Hardware systems in VR.
6. Sensors and sense organs.
7. Configuration space of sense organs.
8. What is the *Visual*: world-fixed vs. user-fixed.
9. What is the sensors in VR?
10. What is the Visual renderin? Steps of Visual rendering.
11. Steps of Rendering in virtual reality.
12. What is the 3D rendering? Steps of 3D rendering.
13. Difference between VR rendering and 3D rendering.
14. Describe what is Immersive photos in virtual reality?
15. Describe what is Immersive videos in virtual reality?
16. Speeds and accelerations in VR.
17. Describe what is the One dimensional the world?
18. In the virtual world physics.
19. Suitable non-committal action and vection.
20. To sensitivity effect doer factors.
21. Types of Eye Movements in VR.
22. What is the *Saccades* in Eye Movements?
23. What is the *Vestibulo-ocular reflex* in Eye Movements?
24. What is the *Smooth pursuit* in Eye Movements?



25. What is the *Vergence* in Eye Movements?
26. What is the *Optokinetic reflex* in Eye Movements?
27. High-Quality Rendering and Graphics in Unreal engine.
28. What is the Blueprint in Unreal engine and types of it.
29. Differences of AR and VR.
30. What is a nodes in Unreal engine? Why nodes need users of unreal engine?
31. Describe Core Blueprint Concepts.
32. Materials in Unreal engine.
33. What is a Level Blueprints? And difference between other types of blueprints.
34. What is a Class Blueprints? And difference between other types of blueprints.
35. What is a Blueprint Macros? And difference between other types of blueprints.
36. What is a Blueprint Interfaces? And difference between other types of blueprints.
37. Describe Blueprint Workflow.
38. Blueprints for VR and 3D Rendering.
39. Bad effects of VR for users health.
41. What is Unreal Engine, and how does it differ from other game engines like Unity?
42. Explain the difference between Unreal Engine 4 and Unreal Engine 5. What are the key features of UE5?
43. What is the Unreal Engine Marketplace, and how can you use assets from it in your project?
44. What is a Blueprint in Unreal Engine, and how does it differ from traditional coding?
45. How does Unreal Engine handle cross-platform development, and what are the challenges involved?
46. What are the main components of the Unreal Engine interface, and how are they used in game development?
47. Explain the role of the Content Browser in Unreal Engine and how it helps in asset management.
48. What is the "Viewport" in Unreal Engine, and how can you use it for game design and debugging?



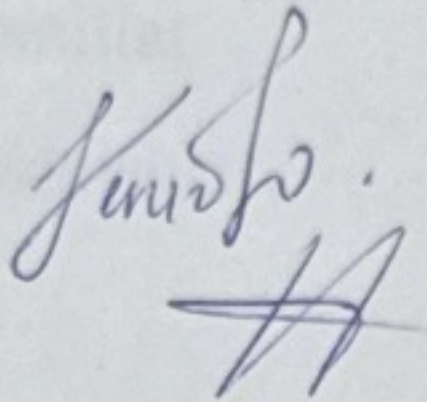
49. Describe the process of creating a new project in Unreal Engine. What are the main settings you need to configure?
50. What are the key steps involved in packaging a game for release in Unreal Engine?
51. How do Blueprints in Unreal Engine allow designers to implement game logic without writing code?
52. What are the advantages and disadvantages of using Blueprints over C++ for game development?
53. What is a "Class Blueprint," and how is it different from an "Actor Blueprint"?
54. How do you create and use variables in Blueprints? Provide an example of a simple Blueprint script.
55. What is the role of the "Event Graph" in a Blueprint, and how does it interact with other parts of the game?
56. How does C++ integration work in Unreal Engine, and how does it enhance performance compared to Blueprints?
57. Explain the process of creating a custom class in Unreal Engine using C++.
58. What is a "Game Mode" in Unreal Engine, and how would you define a custom Game Mode class in C++?
59. What are Unreal Engine's memory management techniques, and how do you handle memory leaks in C++?
60. Explain the importance of "Delegates" and "Events" in C++ programming in Unreal Engine.
61. What are Static Meshes and Skeletal Meshes in Unreal Engine, and how do they differ in usage?
62. How does Unreal Engine handle physics simulations for objects within a game world?
63. What is the role of the "Landscape" tool in Unreal Engine, and how is it used to create terrain?
64. How can you create and implement lighting in Unreal Engine? What are the differences between dynamic and baked lighting?
65. Explain the concept of "Materials" in Unreal Engine. How do you create and assign materials to objects?
66. What is the difference between "Skeletal Animation" and "Static Animation" in Unreal Engine?



67. Explain how the "Animation Blueprint" works in Unreal Engine. How do you use it for character animation?
68. What is the purpose of the "AnimGraph" in Unreal Engine, and how is it used to blend animations?
69. How does Unreal Engine handle facial animation and lip-syncing?
70. Describe the process of setting up and using a "State Machine" for character animation in Unreal Engine.

Assistant

Head of department



F.S.Ortiqova

F.M.Nuraliev