2025-2026 academic year Faculty of Television Technologies
For 4th year students of the educational direction of Television and Media Technologies on the subject of "VR Basics"
FINAL CONTROL QUESTIONS

1. Define virtual reality. (6 points)
2. Explain translation in 3D space. (10 points)
3. Compare 2D and 3D tracking systems. (10 points)
4. Analyze the impact of latency in VR systems. (12 points)
5. Evaluate factors affecting immersion in VR. (12 points)
6. List main components of a VR system. (6 points)
7. Explain axis–angle rotation. (10 points)
8. Analyze differences between rasterization and ray tracing. (10 points)
9. Evaluate causes of VR sickness. (12 points)
10. Justify methods to reduce VR discomfort. (12 points)
11. Define immersion in VR. (6 points)
12. Explain how lenses affect VR displays. (10 points)
13. Compare inside-out and outside-in tracking. (10 points)
14. Evaluate importance of frame rate. (12 points)
15. Analyze factors influencing presence. (12 points)
16. Define field of view (FOV). (6 points)
17. Explain coordinate transformations. (10 points)
18. Analyze depth perception cues. (10 points)
19. Evaluate optical distortions in HMDs. (12 points)
20. Justify correction techniques for distortion. (12 points)
21. Define stereoscopy. (6 points)
22. Explain human visual pathway. (10 points)
23. Compare real and virtual motion perception. (10 points)
24. Evaluate tracking accuracy challenges. (12 points)
25. Analyze effects of mismatched motion. (12 points)
26. Define motion parallax. (6 points)
27. Explain vestibular system role in VR. (10 points)
28. Analyze interaction techniques in VR. (10 points)
29. Evaluate user safety issues. (12 points)
30. Justify methods to improve safety. (12 points)
31. Define latency. (6 points)
32. Explain shading models. (10 points)
33. Compare locomotion methods. (10 points)
34. Evaluate role of audio in VR. (12 points)
35. Analyze spatial audio perception. (12 points)
36. Define HMD. (6 points)
37. Explain positional tracking. (10 points)
38. Analyze visual perception factors. (10 points)
39. Evaluate performance optimization principles. (12 points)
40. Justify frame rate improvement methods. (12 points)
41. Define frame rate. (6 points)
42. Explain ray tracing basics. (10 points)
43. Compare binocular and monocular cues. (10 points)
44. Evaluate rendering trade-offs. (12 points)
45. Analyze latency vs quality trade-offs. (12 points)
46. Define presence. (6 points)
47. Explain distortion correction. (10 points)
48. Analyze object tracking methods. (10 points)
49. Evaluate VR interface principles. (12 points)
50. Justify effective interaction design. (12 points)
51. Define difference between VR and AR. (6 points)
52. Explain transformation chaining. (10 points)
53. Compare VR devices. (10 points)
54. Evaluate human–computer interaction in VR. (12 points)
55. Analyze usability challenges. (12 points)
56. Define pixel density. (6 points)
57. Explain light behavior in lenses. (10 points)
58. Analyze motion sickness causes. (10 points)
59. Evaluate spatial audio techniques. (12 points)
60. Justify audio importance in immersion. (12 points)
61. Define refresh rate. (6 points)
62. Explain coordinate systems. (10 points)
63. Analyze physics simulation in VR. (10 points)
64. Evaluate interaction methods. (12 points)
65. Justify natural interaction design. (12 points)
66. Define virtual environment. (6 points)
67. Explain 3D scanning principles. (10 points)
68. Analyze rendering pipeline stages. (10 points)
69. Evaluate optimization techniques. (12 points)
70. Justify performance vs quality balance. (12 points)
71. Define tracking. (6 points)
72. Explain spatial audio. (10 points)
73. Compare VR vs traditional UI. (10 points)
74. Evaluate hardware limitations. (12 points)
75. Analyze system constraints in VR. (12 points)
76. Define locomotion. (6 points)
77. Explain interaction remapping. (10 points)
78. Analyze rendering challenges. (10 points)
79. Evaluate safety guidelines. (12 points)
80. Justify user protection methods. (12 points)
81. Define depth perception. (6 points)
82. Explain motion tracking. (10 points)
83. Compare VR and real-world physics. (10 points)
84. Evaluate latency reduction techniques. (12 points)
85. Analyze system responsiveness factors. (12 points)
86. Define immersion. (6 points)
87. Explain role of game engines in VR. (10 points)
88. Analyze environmental effects. (10 points)
89. Evaluate graphical optimization. (12 points)
90. Justify efficient rendering strategies. (12 points)
91. Define stereoscopic vision. (6 points)
92. Explain animation in VR systems. (10 points)
93. Compare input devices. (10 points)
94. Evaluate VR in medicine. (12 points)
95. Analyze benefits and limitations. (12 points)
96. Define VR system. (6 points)
97. Explain texture optimization principles. (10 points)
98. Analyze user experience factors. (10 points)
99. Evaluate future trends in VR. (12 points)
100. Justify importance of VR development. (12 points)

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