Course No: **MUL 4318**	**University of Palestine**	**Dr. Naji Shukri Alzaza**
Course Title: **Virtual Reality (VR)**		**Faculty of Information Technology**
Date: **Wednesday 30/05/2018**		
No. of Questions: **(6)**		**Student Name: _____**
Time: **2 Hours**	**Final Exam**	
Total Grade: **(50) Marks**	**2ⁿᵈ Semester 2017/2018**	**Student No.: _____**

University of Palestine

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Final Exam
2ⁿᵈ Semester 2017/2018

ANSWER ALL QUESTIONS

Question 1: Discuss with examples the following virtual environment issues: *(6 Marks, 2 for each)***,**

1. Virtual Objects

2. Level of detail

3. Collision Detection

Question 2: Explain the following virtual reality issues: *(6 Marks, 3 for each)*

1. **Image Based**

2. **Fully-immersive**

Question 3: Explain the utilizing of training through VR technology. *(5 Marks)*

Question 4: Identify which statement is _True_ and which is _False._ You have to put your final answers in the table below. *(10 Marks, 1 for each)*

1. _____ Plug-ins is not required to view VRML.

2. _____ Immersive VR does not require any devices to be attached to the body.

3. _____ VR software needs to allow for navigation and interaction within the 2D/3D world.

4. _____ VR is a high-end user-computer interface include only visual, auditory, and tactile.

5. _____ With VR trainees can train by interacting with virtual materials similarly to the ways they would interact with real materials.

6. _____ Distance, size, velocity, and eccentricity are issues that very important to implement LOD.

7. _____ VRML contains a number of features such as hierarchical transformations, light sources, viewpoints, geometry, animation, fog, material properties, and texture mapping.

8. _____ Cylindrical Panorama is one of Image Based types.

9. _____ The continuous decrease of the costs and the increasing capabilities of the VR technology have slowly increased its penetration.

10. _____ Lighting is a secondary component in illuminating the VE so that users are able to see the virtual objects properly.

Question 5: Answer the following Questions: *(13 Marks)*

(a) List six (6) appropriate areas to develop VR applications: *(3 Marks, ½ for each)*

(d) What is Augmented Reality? *(2Marks)*

(b) What are the advantages/benefits of VR. List 5? *(5Marks)*

(c) There are three kinds of relationship between Virtual Environments and Physical Environments. List them and give an example for each. *(3 Marks, 1 for each)*

Question 6: Choose the correct answer of the following statements. You have to put your final answers in the table below. *(10 Marks, 1 for each)*

1	2	3	4	5	6	7	8	9	10

1. _____ **is an important tool for maintaining a highly interaction.**

   ① Level of Details   ② Animation

   ③ Modeling   ④ Lighting

2. _____ **is a VR movies can be viewed with an Internet browser when the proper plug-in viewer has been installed.**

   ① Image based   ② Online

   ③ Answer 1 & 2   ④ None of above

3. **Consideration issues in VR image based comprises _____ .**

① Hotspots   ② Virtual Tours

③ Viewers   ④ All of above

4. **_____ can provide opportunities for new kinds of experience, enabling users to interact with objects and navigate in 3D space in ways not possible in physical environments.**

① Physical environments   ② Virtual environments

③ Answer 1 & 2   ④ None of above

5. **_____ characteristic of virtual reality enhances the engagement of the user in the virtual environment by acting and reacting users in the virtual world.**

① Interactive   ② Modeling

③ Answer 1 & 2   ④ Lighting

6. **_____ VR benefits comprises.**

① What-if scenarios   ② Improved quality of life

③ Answer 1 & 2   ④ None of above

7. **_____ are programming libraries that provide a set of VR functions and scripts.**

① VRML   ② VR SDKs

③ Answer 1 & 2   ④ None of above

8. **_____ are programming libraries that provide a set of common VR functions.**

① VRML   ② VR SDKs

③ Quest 3D   ④ Answer 1 & 3

9. **Virtual _____ is the use of VR techniques to reconstruct historical monuments, prehistoric settlements, early military fortifications, and medieval cities.**

① Training   ② Heritage

③ Online tourism   ④ None of above

10. **VR sensation is referred to as _____ .**

① Engagement   ② Immersion

③ Presence   ④ All of above

==================== BEST WISHES ====================