

CS 531 – Fall 2020**SECURITY IN CYBER-PHYSICAL SYSTEMS*****Instructor: Abdullah Aydeger, Ph.D.*****QUIZ #1****08/27/2020 Duration: 20 minutes****(5 points each unless otherwise noted)**

If there is more than one answer, please select both. Hint: Some questions do have multiple answers.

Please read all questions carefully and pay attention if it says “NOT” in the question. Please write a justification for each answer for partial credits.

- 1) Which of the following is a component of a typical CPS? (10 points)
 - a. Sensor
 - b. Actuator
 - c. Communication link
 - d. Software developer

- 2) Why is there a such class “Security in CPS”? Please elaborate. (10 points)

- 3) Which is not a part of Transportation CPS? (10 points)
 - a. Traffic light
 - b. Police on the road
 - c. Pedestrians
 - d. Traffic cameras

- 4) Please fill the table: (30 points)

<i>Feature</i>	<i>CPS</i>	<i>IT Network</i>
Objective	<input type="radio"/> Availability <input type="radio"/> Confidentiality	<input type="radio"/> Availability <input type="radio"/> Confidentiality
Network topology	<input type="radio"/> Static <input type="radio"/> Dynamic	<input type="radio"/> Static <input type="radio"/> Dynamic
Updates/Patching	<input type="radio"/> Frequent <input type="radio"/> Infrequent	<input type="radio"/> Frequent <input type="radio"/> Infrequent

- 5) TCP/IP is a
 - a. protocol
 - b. hardware
 - c. software
 - d. network protocol suite

- 6) Which is not an issue to be concerned with at the transport layer?
 - a. in-sequence delivery
 - b. reliability
 - c. framing
 - d. flow control

- 7) Protocols in the ____ layer accept data from the Network layer and manage end-to-end delivery of data.

- 8) The IP (Internet Protocol) operates in the Transport layer.
 - a. True
 - b. False

- 9) Which of the following is not a network component?
 - a. switch
 - b. wifi card
 - c. router
 - d. mouse

- 10) Which of the following is a layer 2 (network layer) device?
 - a. switch
 - b. hub
 - c. router
 - d. LAN

- 11) MAC addresses are used at which layer?
 - a. application
 - b. transport
 - c. network
 - d. link

- 12) Routing is done with
 - a. MAC addresses
 - b. IP addresses
 - c. wireless addresses
 - d. physical addresses