Week 9: Assignment 9

Assignment not submitted

1)

Which of the following is not a reason for using fog computing concept in IIoT?

a) The generated data can be time-sensitive which require immediate response to avoid hazards

b) Fog can address the weaknesses of industrial automation

c) To enable new functionalities along with additional features

d) Fog simplifies the interoperability among different devices which work on different protocols

a

b

c

a

b

c

e

d

- Which of the following are the use cases of IIoT?
 - a) Smart Grid and Power
 - b) Oil and Gas Industries
 - c) Both (a) and (b)
 - d) None of the above







3)	Which of the following is not a fog service provider? a) FogHorn b) Amazon Web Services c) Crosser d) Sonm
	a b
	"As the fog nodes are placed closer to the source device, it provides a quicker response to the computation, resources, storage, and service request of the end-users." True or false? a) True b) False
(a	
5)	Which of the following is not an object in R? a) Vectors b) Raw c) Data Frames d) Matrices
<!--</td--><td></td>	
a l	Which of the following package contains the functions for creating predictive models? a) Rpart b) e1071 c) caret d) igraph
○ a ○ b ○ c	

Julia merges the benefits of language with the performance of language.
a) Java, Python b) Python, C c) C, Python d) C++, Python
○ a
Which of the following is/are the essential characteristic(s) of cloud computing according to NIST? a) On-demand self service b) Resource pooling c) Rapid elasticity d) All the above
Which of the following are the processes associated with Data Management in IIoT? a) Generation, Acquisition, Storage, and Analysis b) Generation, Transmission, Storage, and Analysis c) Generation, Transmission, Storage, and Filtration d) None the above
In Hadoop Master/Slave architecture, which of the following is not the task of the Master? a) Executes operations like opening, closing, and renaming files and directories b) Determines the mapping of blocks to data nodes c) Serves read and write requests from the file system's clients d) None of the above
○ a ○ b ● c

11) Choose the one which is wrong: a) Data center network should be agile b) Data center network should be reliable c) Data center network should be scalable d) none of the above
Оа
Ов
⊙ d
How many topology does the data center network have? a) 3 b) 4 c) 5 d) 6
Оа
● b
What are the components of Software-Defined Data Center? a) Edge node virtualization, OS virtualization, machine virtualization, Arithmetic logic layer b) Network virtualization, Storage virtualization, Server virtualization, Business logic layer c) Component virtualization, System virtualization, Server optimization, Network logic layer d) Network optimization, Storage optimization, Server optimization, Arithmetic logic unit
Оа
 b

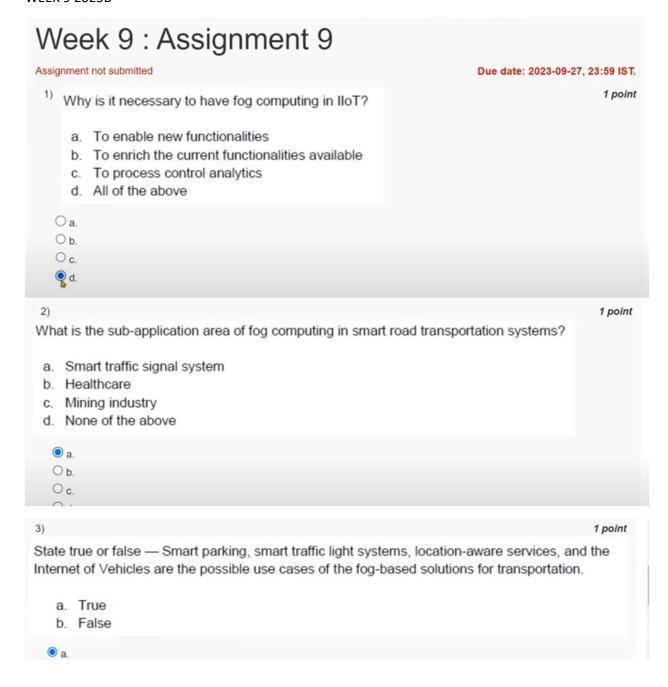
14)	What is SDN?
l	a) It is not a new technology, but rather reshaping the current network architecture. b) It is restructuring the current network infrastructure in order to achieve an improved network management. c) Both a) and b) d) Neither b) nor a)
0	b
15	5)
,	What are the thee layers of SDN?
	 a) Data plane, Network plane, and Infrastructure plane.
	 b) Data plane, Network plane, and Application plane.
	 c) Data plane, Control plane, and Application plane.
	d) Data plane, Control plane, and Network plane.
	Оа
	O b
	○ c

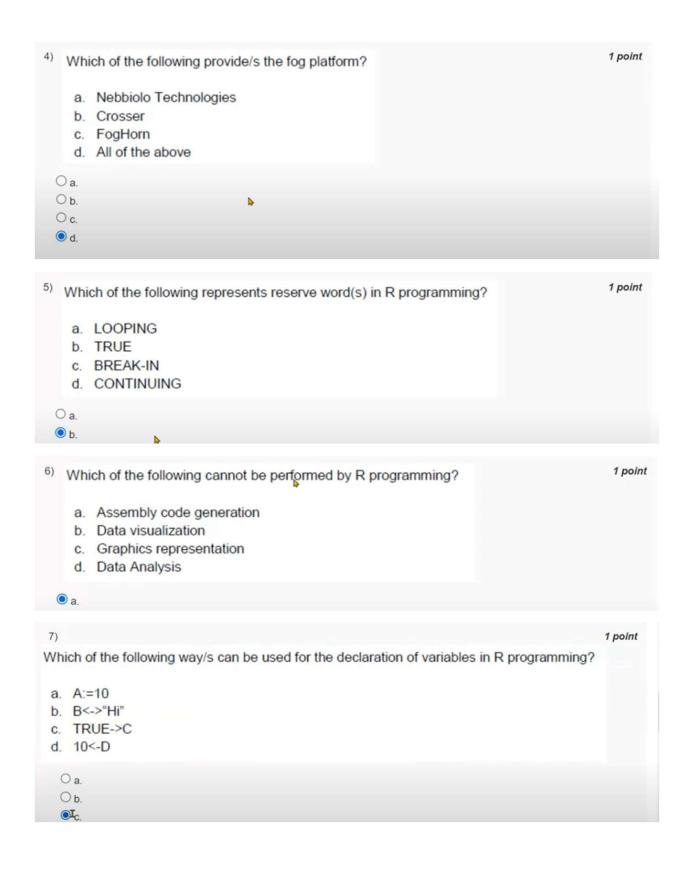
WEEK 9 2023A

O(a) Consistent release of data from sensors and machines O(b) Need for immediate action and quick response O(c) Data may be critical as well as time-sensitive O(d) All of the above	1 point
 Organize the elements of fog computing architecture in ascending order of data processing decomposition. (a) Industrial end devices, Fog devices, and Cloud (b) Industrial end devices, Cloud, and Fog devices (c) Cloud, Industrial end devices, and Fog Devices (d) None of the above 	elay.
3) Which of the following is/are the characteristic(s) of fog-enabled IIoT? (a) Real-time monitoring and visualization (b) Shrinkable processing architecture (c) Increased overall cost (d) All of the above	
 4) What are the advantages of using fog-based architecture in the smart grid and power industry? (a) Dynamic demand of appliances (b) Bi-directional communication between the consumer and supplier (c) Advanced metering infrastructure for bi-directional communication (d) All of the above 	
 Select the advantages of fog-based architecture in the oil and gas industry. (a) Offering real-time advanced operation (b) Detection of unusual events (c) Step by step automation (d) All of the above 	

Which of the following data type is used in the R programming language? O (a) Logical
7) Which of the following option is correct? (a) e1071: Network analysis tools (b) rpart: Regression tree etc
8) Why is Julia programming used? (a) Open source (b) Distributed computation and parallelism possible (c) Support efficiently Unicode (d) All of the above
 Which of the following options is/are valid for the Julia programming language? (a) Use println() is used to print (b) Variables can be assigned without defining the type (c) Assigning strings (d) All of the above
10) Select the correct cloud computing service model (s). (a) Infrastructure-as-a-Service
11) Which of the following properties is /are valid for a data center network? (a) Stable (b) Secure (c) Reliable (d) All of the above

12) What is SDN?
 (a) Restructuring the current network infrastructure for improved network management (b) It is not a new technology – rather reshaping the current network architecture (c) Control and data planes are decoupled from the traditional forwarding devices (d) All of the above.
13) Which of the following aspects is/are true for SDN? (a) Rule placement (b) Controller placement (c) Security (d) All of the above
14) Select the correct application (s) of SDN. (a) WSN management (b) IoT applications (c) IIoT applications (d) All of the above
15) The mining industry uses to load/unload mining materials. (a) Conveyer-belt





8)	1 point
Fill in the blanks operator can be used to calculate the remainder of the divising R programming.	on in
a. / b. \ c. %% d. I	
○ a. ○ b. ② c.	
State true or false — '&' is a special operator that can create a series of numbers for a vector R programming.	1 point in
a. True	
b. False	
○ a.	
10)	1 point
Which of the following represents the correct order for the process of Data management?	
a. Acquisition -> Generation -> Storage -> Analysis	
b. Generation -> Acquisition -> Storage -> Analysis	
 c. Acquisition -> Storage -> Generation -> Analysis d. Generation -> Analysis -> Storage -> Acquisition 	
○ a.	
11)	1 point
Fill in the blanks is used to find the spatial relationship between the objects an	d to
analyze the geographic relation among them.	
Streaming analytics	
b. Time-series analytics	
c. Spatial analytics d. Descriptive analytics	
○ a. ○ b.	
● c.	
O d.	

Which of the following represents the properties of data center networks? a. Inconsistent b. Unreliable c. Secure d. Unscalable	1 point
○ b. ②IC. ○ d.	
Which of the following represents the topology used by the data center network? a. Eight-tier DCN b. Jcell c. Dcell d. QCube	1 point
O a.	
○ b.	
O d.	
What are the challenges of a data center network? a. Scalability b. Static resource assignment c. Fault-tolerance d. All of the above	, pom
○ a.○ b.○ c.○ d.	
INTERNET UF	
15) State true or false —Software-Defined Network (SD THINGS WEEK 10 ASSIGNMENT ANSWERS	6:30
a. True b. False	
○ a.	