

## WEEK 3 2020A

# Assignment 3

The due date for submitting this assignment has passed.  
As per our records you have not submitted this assignment.

Due on 2020-02-19, 23:59 IST.

- 1) PLM maximizes- 0 points
- a. Product revenues and product's value.
  - b. Product associated costs.
  - c. All of the above.
  - d. Only a.

- a.
- b.
- c.
- d.

No, the answer is incorrect.

Score: 0

Accepted Answers:  
d.

- 2) Key Performance Indicators (KPIs) are known as metrics. What are they used for? 1 point
- a. Set targets for the company.
  - b. Reduce the product quality.
  - c. Reduce the profit.
  - d. Increase the time.

- a.
- b.
- c.
- d.

No, the answer is incorrect.

Score: 0

Accepted Answers:  
a.

- 3) What is structured data? 1 point
- a. Data that can be easily organized.
  - b. Managed by Structured Query Language (SQL) in databases.
  - c. Stored in relational databases.
  - d. All of the above.

- a.
- b.
- c.
- d.

No, the answer is incorrect.

Score: 0

Accepted Answers:  
d.

4)

1 point

Variety means in Big data-

- a. Category of the data such as structured data or unstructured data.
- b. Speed of generation data.
- c. Quantity of created data.
- d. All of the above.

- a.
- b.
- c.
- d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

5)

1 point

What is redundancy mitigation?

- a. Eliminate repeated data through detection.
- b. Combine data from various sources.
- c. Spot incorrect data.
- d. None of the above.

- a.
- b.
- c.
- d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

6)

1 point

There are three steps in data acquisition. What they are?

- a. Data collection, Data transmission and Data pre-processing.
- b. Integration, Clearing and Visualization.
- c. Data collection, Clearing and Integration.
- d. None of the above.

- a.
- b.
- c.
- d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

7)

1 point

What is the full form of PMU?

- a. Pulse measuring unit
- b. Phasor measuring unit
- c. Peak measuring unit
- d. None of these

- a.
- b.
- c.
- d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

b.

8) Smart sensors are defined as the combination of a sensor with \_\_\_\_\_. 1 point

- a. Signal conditioning
- b. Embedded algorithms
- c. Digital interface
- d. All of these

- a.
- b.
- c.
- d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

d.

9) What are the sensor modalities used for Augmented Reality? 1 point

- a. visual
- b. auditory
- c. haptic
- d. all of the above.

- a.
- b.
- c.
- d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

d.

10) Which one is the key component of Augmented Reality devices? 1 point

- a. sensors and cameras
- b. mirror unit
- c. machines
- d. none of the above

- a.
- b.
- c.
- d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

11) Artificial intelligence is a \_\_\_\_\_. 1 point

- a. Creation of manmade thinking power
- b. Creation of software having intuitive decision making ability
- c. Both a and b
- d. None

- a.
- b.
- c.
- d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.

12) 1 point

**Significance of AI in Agriculture industry**

- a. Crop and soil monitoring
- b. Precision agriculture
- c. Supply chain efficiency
- d. All of the above

- a.
- b.
- c.
- d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

d.

13) 1 point

How many components are there in PLM to handle the product across its lifecycle-

- a. Eight.
- b. Six.
- c. Nine.
- d. Ten.

- a.
- b.
- c.
- d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.

14) 1 point

Why data analytics is required?

- a. For appropriate product recommendations.
- b. Helps to learn about competitors.
- c. Protect from wrongful decisions.
- d. All of the above.

- a.
- b.
- c.
- d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

d.

15) 1 point

Which devices are used for fully-immersive simulations?

- a. Head mounted display
- b. Motion detecting devices
- c. Machine gesture detection device
- d. Both (a) and (b)

- a.
- b.
- c.
- d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

d.

## Week 3 Assignment 3

Assignment not submitted

Due date: 2021-02-10, 23:59 IST.

- 1) How are structured data managed in databases? 1 point

- a. SQL language
- b. Traditional RDBMS
- c. Both (a) and (b)
- d. None of the above

- (a)
- (b)
- (c)
- (d)

- 2) 1 point

In what form does the superimposition-based AR substitute the original view of the object?

- a. Only partially
- b. Always fully
- c. Either partially or fully
- d. None of the above

- (a)
- (b)
- (c)
- (d)

- 3) What are the applications of AI in Airbus? 1 point

- a. Improve the productivity of manufacturing process
- b. Increase the amount of raw materials required
- c. Decrease the cost of per unit product
- d. Minimize the time required for production

- (a)
- (b)
- (c)
- (d)

- 4) What type of image is created in VR? 1 point

- a. Two-dimensional image
- b. Realistic three-dimensional image
- c. Only one-dimensional image
- d. None of the above

- (a)
- (b)
- (c)
- (d)

- 5) 1 point

What type of view/s of the physical environment are 'augmented' with computer-generated superimposed images?

- a. Only direct views
- b. Only indirect views
- c. Direct/indirect views
- d. None of the above

- (a)
- (b)
- (c)
- (d)

- |   |                |
|---|----------------|
| 6) How is big data stored using a file system?  | <i>1 point</i> |
| a. Distributed file structure<br>b. Centralized file structure<br>c. Either distributed or centralized file structure<br>d. Both distributed and centralized file structure   |                |
| <input checked="" type="radio"/> (a)<br><input type="radio"/> (b)<br><input type="radio"/> (c)<br><input type="radio"/> (d)   |                |
| 7) What do you mean by unstructured data?   | <i>1 point</i> |
| a. Data without any predefined model<br>b. Data with a defined model<br>c. Both (a) and (b)<br>d. None of the above   |                |
| <input checked="" type="radio"/> (a)<br><input type="radio"/> (b)<br><input type="radio"/> (c)<br><input type="radio"/> (d)   |                |
| 8) What are the characteristics of an intelligent sensor?   | <i>1 point</i> |
| a. Capable of processing sensed data<br>b. Performs pre-defined functions<br>c. Manages and controls external sensors/devices<br>d. All of the above  |                |
| <input type="radio"/> (a)<br><input type="radio"/> (b)<br><input type="radio"/> (c)<br><input checked="" type="radio"/> (d)   |                |
| 9) Why is decision making important in cognition-based CPS architecture?  | <i>1 point</i> |
| a. Prioritization and optimization of processes<br>b. Optimal value of product<br>c. Optimal amount of raw materials used<br>d. Optimal amount of processing time   |                |
| <input checked="" type="radio"/> (a)<br><input type="radio"/> (b)<br><input type="radio"/> (c)<br><input type="radio"/> (d)   |                |
| 10) How does the collaboration platform encourage renovation?   | <i>1 point</i> |
| a. Transforming knowledge management into business information<br>b. Transforming business innovation into business management<br>c. Transforming business innovation into knowledge management<br>d. None of the above |                |
| <input checked="" type="radio"/> (a)<br><input type="radio"/> (b)<br><input type="radio"/> (c)<br><input type="radio"/> (d)   |                |

11) How machine learning helps to empower machines? *1 point*

- a. Based on experience
- b. Based on raw materials used
- c. Based on downtime of machines
- d. None of the above

(a)  
 (b)  
 (c)  
 (d)

12) What does the term concurrency signify? *1 point*

- a. Multiple processes are running concurrently
- b. Single process is running continuously
- c. Multiple processes are run in an ordered manner
- d. One of the multiple processes is running continuously

(a)  
 (b)  
 (c)  
 (d)

13) How is coordination initiated in the collaboration platform in Industry 4.0? *1 point*

- a. Establish a network
- b. Provide authority to decision makers
- c. Both (a) and (b)
- d. None of the above

(a)  
 (b)  
 (c)  
 (d)

14) What are the key component/s of AR devices? *1 point*

- a. Sensors and Cameras
- b. Projection Screen
- c. Processing Unit
- d. All of the above

(a)  
 (b)  
 (c)

15) Who proposed the term Artificial Intelligence? *1 point*

- a. John McCarthy
- b. John Carthy
- c. Stephen Carthy
- d. McStephenCarthy

(a)

## Week 3 : Assignment 3

Assignment not submitted

Due date: 2021-08-25, 23:59 IST.

1)

- Which of the following statements is true for Cyber Physical Systems?
- a. Possess compute, communicate and control capabilities
  - b. Interact with the physical world through sensors and actuators.
  - c. Both a and b
  - d. None of the above

- (a)
- (b)
- (c)
- (d)

2)

- Which of the following is/are application(s) of CPS in the transportation industry?
- a. Vehicle health monitoring
  - b. Vehicle proximity detection for safety
  - c. Both a and b
  - d. None of the above

- (a)
- (b)
- (c)
- (d)

3)

- How many levels are defined in the '5C' architecture for CPS-based manufacturing systems?

- a. 7
- b. 5
- c. 6
- d. 1

- (a)
- (b)
- (c)
- (d)

4)

- Which of the following supervisory controls is/are required to determine the actions in CPS-based manufacturing systems?

- a. Self-configuration for resilience
- b. Self-adjustment for variations
- c. Self-optimization for disturbances
- d. All of the above

- (a)
- (b)
- (c)
- (d)

5)

- Which of the following solutions can be used to overcome the limitations of smart sensors?

- a. Next generation intelligent sensors
- b. Manual calibration of sensors
- c. Narrow application spectrum
- d. None of the above

- (a)
- (b)
- (c)
- (d)

6) Which of the following enable(s) collaboration productivity in Industry 4.0?

- a. Coordination
- b. Industrialization
- c. IT proliferation
- d. All of the above

(a)  
 (b)  
 (c)  
 (d)

7) What does PLM stand for?

- a. Production Lifecycle Management
- b. Product Lifecycle Management
- c. Product Longevity Management
- d. Product Lifecycle Manager

(a)  
 (b)  
 (c)  
 (d)

8) What is the full form of KPI?

- a. Key Production Indicator
- b. Key Performance Indicator
- c. Key Product Increment
- d. None of the above

(a)  
 (b)  
 (c)  
 (d)

9) Which of the following is not a part of the ten-step approach in PLM solution?

- a. Data gathering
- b. Education of PLM
- c. Development strategy
- d. Reduce manpower

(a)  
 (b)  
 (c)  
 (d)

10) \_\_\_\_\_ is an enhanced version of reality.

- a. Virtual reality
- b. Augmented reality
- c. Digital image
- d. HD video

(a)  
 (b)  
 (c)  
 (d)

11)

\_\_\_\_\_ is a mixture of interactive hardware and software-based artificial environments.

- a. Virtual reality
- b. Augmented reality
- c. Digital image
- d. HD video

(a)

(b)

(c)

(d)

12) A computer program with AI uses which of the following search methods?

- a. Heuristic
- b. Algorithmic
- c. Huge data-based
- d. None of the above

(a)

(b)

(c)

(d)

13)

Deep learning is a subset of machine learning which can learn automatically by finding the features of the object on its own.

- a. True
- b. False

(a)

(b)

14) Big data consists of --

- a. Structured data
- b. Unstructured data
- c. Both a and b
- d. None of the above

(a)

(b)

(c)

(d)

15)

What is HDFS?

- a. Virtual reality application
- b. Smart sensor
- c. File system
- d. Healthcare system

(a)

(b)

(c)

(d)

## WEEK 3 2022A

### Week 3 : Assignment 3

Assignment not submitted

Due date: 2022-02-16, 23:59 IST.

- 1) Which of the following is true about Cyber-Physical Systems? 1 point
- a. It is a generalization of "embedded systems"
  - b. It possesses computation, communication, and controlling capabilities
  - c. Both (a) and (b)
  - d. None of the above
- 2) State true or false — "Cyber-Physical systems are equipped with control systems with feedback loop" 1 point
- a. True
  - b. False
- 3) What is Single Source of Truth (SSoT) in the context of collaboration productivity in Industry 4.0 ? 1 point
- a. Practice of formatting information models to store every data element exactly once
  - b. Practice of formatting information models to store every data element exactly twice
  - c. Practice of formatting information models to store duplicate copy of every data element
  - d. None of the above
- 4) Which of the following is/are the main goal(s) of PLM? 1 point
- a. Maximize product revenue
  - b. Decrease product-associated costs
  - c. Increase product's value
  - d. All of the above  
✓
- 5) Which of the following is not a method/technique to refine production across the lifecycle in PLM? 1 point
- a. ABC
  - b. DFS
  - c. PAY
  - d. All of the above
- 6) State true or false — "Augmented reality amplifies the present perception of reality". 1 point
- a. False
  - b. True
- 7) \_\_\_\_\_ gives an outcome when the reader is sensed by a camera and visual marker. 1 point
- a. Marker-based AR
  - b. Markerless AR
  - c. Projection-based AR
  - d. Superimposition-based AR
- 8) Which of the following uses a real world setting for its functioning -- 1 point
- a. AR
  - b. VR
  - c. Both (a) and (b)
  - d. None of the above
- 9) Virtual reality incorporates \_\_\_\_\_ and \_\_\_\_\_ sensory feedback. 1 point
- a. auditory, visual
  - b. temperature, humidity
  - c. solid, liquid
  - d. None of the above

10) State true or false — "Artificial Intelligence is a creation of software having intuitive decision-making ability".

1 point

- a. True
- b. False

11) \_\_\_\_\_ is a subset of machine learning that can learn automatically by finding the features of the object on its own.

1 point

- a. Deep learning
- b. Artificial intelligence
- c. Human learning
- d. None of the above

12) SQL stands for ...

1 point

- a. Structured Query Language
- b. Semantic Query Language
- c. Source Query Language
- d. Safe Query Language

13) Which of the following is not a characteristic of Big Data ?

1 point

- a. Velocity
- b. Veracity
- c. Vitality
- d. Value

14) HDFS is a file system derived from open-source codes of \_\_\_\_\_.

1 point

- a. Smart FS
- b. KFS
- c. GFS
- d. None of the above

15) Which of the following feature(s) is/are essential for cloud-based analytics methods as per NIST?

1 point

- a. Wide network access
- b. Method grouping
- c. Fast flexibility
- d. All of the above

WEEK 3 2022B

## Week 3 : Assignment 3

Assignment not submitted

Due date: 2022-08-17, 23:59 IST.

1)

What is the difference between a Cyber-Physical System (CPS) and an embedded system?

1 point

- a. CPS is confined to one system, while embedded system is a networked set of multiple CPSs
- b. Embedded system is confined to one system, while CPS is a networked set of multiple embedded systems
- c. Both a and b
- d. None of the above

a  
 b  
 c  
 d

2)

"Cyber-Physical systems are equipped with control systems with feedback loop". Is the statement true or false?

1 point

- a. True
- b. False

a  
 b

3)

What is cognition in CPS architecture for IIoT?

1 point

- a. Conversion of machine data to meaningful information
- b. Supervisory control to determine actions to be taken by the machines
- c. Both a and b
- d. Proper presentation of information to users for generating thorough knowledge of the system

a  
 b  
 c  
 d



4)

"Sensors with small memory and standardized physical connection to enable the communication with processor and data network". Select the option which refers to this statement.

1 point

- a. Smart sensor
- b. DHT sensor
- c. LED sensor
- d. ESP32

a  
 b  
 c  
 d

5) What are the advantages of intelligent sensors?

1 point

- a. Reduce data communication
- b. Application-specific customization of sensor nodes
- c. Continuous calibrating and monitoring of the sensors
- d. All of the above

a  
 b  
 c  
 d

6) Which of the following statements is/are true about Collaboration platform?

1 point

- a. Category of business software which combines organizational networking capacities to operations.
- b. It does not include knowledge management into business operation to encourage
- c. Collaboration platform restricts employees to share information
- d. All of the above

a  
 b  
 c  
 d

7) How many key parts are there which enable collaborative productivity in Industry 4.0?

1 point

- a. 5
- b. 4
- c. 7
- d. 9

a  
 b  
 c  
 d

8) In context of Industry 4.0, what does PLM stand for?

1 point

- a. Product Life Management
- b. Product Lifecycle Management
- c. Both (a) and (b)
- d. None of the above

a  
 b  
 c  
 d

- 9) How many phases are there in a product lifecycle? 1 point
- a. 6  
b. 9  
c. 5  
d. 3
- a  
 b  
 c  
 d
- 10) Which of the following is/are features of smart factory? 1 point
- a. Connected Environment  
b. Transparency of process status  
c. Both a and b  
d. None of the above
- a  
 b  
 c  
 d
- 11) Which of the following is not a type of augmented reality? 1 point
- a. Marker-based AR  
b. Markerless AR  
c. Superimposition-based AR  
d. Timer-based AR
- a  
 b  
 c  
 d
- 12) "Semi-immersive simulations provide a partial or fully immersive experience of the user's senses." True or False? 1 point
- a. True  
b. False
- a  
 b
- 13) "Machine learning is a subset of deep learning which can learn automatically by finding the features of the object by own." True or False? 1 point
- a. True  
b. False
- a  
 b

14) What is velocity in Big Data?

1 point

- a. Speed of generation of data
- b. Categories of data
- c. Data with constantly changing meaning
- d. All of the above

a  
 b  
 c  
 d



15) Select the types of analytics for big data?

1 point

- a. Descriptive
- b. Prescriptive
- c. Predictive
- d. All of the above

a  
 b  
 c  
 d



WEEK 3 2023A

## Week 03: Assignment 03

Assignment not submitted

Due date: 2023-02-15, 23:59 IST.

1) Which of the following is true regarding Cyber-Physical Systems? **1 point**

- (a) They are devices having information processing systems embedded into them.
- (b) They are typically confined to a single device
- (c) They are networked set of embedded systems
- (d) All of the above

2) What are the 5 Cs in the CPS "5C architecture" for Industry 4.0? **1 point**

- (a) Connection, Conversion, Cyber, Cognition, Configuration
- (b) Connection, Communication, Cyber, Cognition, Configuration
- (c) Connection, Communication, Cyber, Carrier, Configuration
- (d) Connection, Conversion, Cyber, Cognition, Carrier

3) What are Smart Sensors? **1 point**

- (a) They are the integration of sensors and actuators with a processor and a communication module.
- (b) They are universal sensors which can sense a wide range of different stimuli.
- (c) They are the kind of sensors which do not require a power source to operate.
- (d) All of the above

4) Which of the following is an example of Collaboration platform **1 point**

- (a) Google Drive
- (b) Outlook
- (c) Backblaze
- (d) ProWork Flow

5) State true or false — “PLM handles a product completely, from single part of the product to entire portfolio of that product”. **1 point**

- (a) True
- (b) False

6) In PLM, how many phases does a product lifecycle have? **1 point**

- (a) 3
- (b) 4
- (c) 5
- (d) 6

7) \_\_\_\_\_ is direct/indirect views of physical **1 point**  
world environments which are “augmented” with computer-generated  
superimposed images

- (a) Augmented Reality
- (b) Virtual Reality
- (c) Both (a) and (b)
- (d) Neither (a) nor (b)

8) What are the four different types of Augmented Reality? **1 point**

- (a) Marker-Based, Markerless, Fully-immersive, Semi-immersive
- (b) Marker-Based, Markerless, Non-immersive, Superimposition Based
- (c) Marker-Based, Non-immersive, Fully-immersive, Semi-immersive
- (d) Marker-Based, Markerless, Projection Based, Superimposition Based

9) \_\_\_\_\_ augmented reality is commonly utilized for **1 point**  
mapping directions.

- (a) Marker-based
- (b) Markerless
- (c) Projection Based
- (d) Superimposition Based

10) Which VR type uses head-mounted displays and motion-**1 point**  
detecting devices to simulate user's experiences?

- (a) Fully-immersive simulations
- (b) Semi-immersive simulations
- (c) Non-immersive simulations
- (d) Both (a) and (b)

11) State true or false — “Linear regression, logistic regression, **1 point**  
random forest, decision tree are some of the most popular unsupervised  
learning algorithms”.

- (a) False
- (b) True

12) A computer program without AI uses \_\_\_\_\_ method **1 point**  
whereas computer program with AI uses \_\_\_\_\_ method

- (a) Large database and algorithmic search, Large knowledge base and heuristic search
- (b) Large knowledge base and heuristic search, Large database and algorithmic search
- (c) Large knowledge base and algorithmic search, Large database and heuristic search
- (d) None of the above

13) Which of the following is correct? **1 point**

- (a) Machine Learning ⊑ Deep Learning ⊑ Artificial Intelligence
- (b) Deep Learning ⊑ Artificial Intelligence ⊑ Machine Learning
- (c) Deep Learning ⊑ Machine Learning ⊑ Artificial Intelligence
- (d) Artificial Intelligence ⊑ Machine Learning ⊑ Deep Learning

14) Big data consists of \_\_\_\_\_.

**1 point**

- (a) Both structured and non-structured data
- (b) Only structured data
- (c) Only non-structured data
- (d) None of the above

15) What does the word "veracity" indicate in Big Data?

**1 point**

- (a) It indicates the data which have no restriction over the input data formats.
- (b) It indicates velocity of generation of data.
- (c) It indicates the data whose meaning is constantly changing.
- (d) It indicates biasness in the data, unusualness and noise in data.

## Week 3 : Assignment 3

Your last recorded submission was on 2023-08-12, 19:09 IST

Due date: 2023-08-16, 23:59 IST.

- 1) What is the full form of CPS? 1 point
- a. Central-Physical System
  - b. Cyber-Physical System
  - c. Cyber-Property System
  - d. Central-Private System
- 2) Select the statement(s) that best describes a CPS. 1 point
- a. A CPS interacts with the physical world through sensors and actuators.
  - b. A CPS is a network of physical and computational components.
  - c. It is a set of multiple networked embedded systems.
  - d. All of the above
- 3) What does conversion refer to in context of CPS architecture for IIoT? 1 point
- a. Conversion of CPS into individual components.
  - b. Conversion of machine data to meaningful information.
  - c. Conversion of present data into future data prediction.
  - d. Conversion of analog signal to digital signal.
- 4) Select the statement which describes one of the limitations of smart sensors. 1 point
- a. Sensor data aggregation not possible.
  - b. Cannot connect with an actuator.
  - c. Cannot connect to a network
  - d. All of the above

5) \_\_\_\_\_ sensors are capable of processing sensed data and performing pre-defined functions by processing data. Fill in the blank with the appropriate option.

1 point

- a. Smart
- b. Intelligent
- c. Digital
- d. Scalar

- a.
- b.
- c.
- d.

6) Which of the following allows application-specific customization of sensor nodes?

1 point

- a. Smart sensors
- b. Intelligent sensors
- c. ADC
- d. None of the above

- a.
- b.
- c.
- d.

7) \_\_\_\_\_ allows employees to share information and solve business problems. Fill in the blank.

1 point

- a. Sharing platform
- b. Business platform
- c. E-Commerce platform
- d. Collaboration platform

- a.
- b.
- c.

8) Coordination is one of the four keys that enable collaboration productivity. How can one initiate coordination?

1 point

- a. Provide authority to decision-makers in a decentralized system.
- b. Format data model to store every data element exactly once.
- c. Bridge the gap between the virtual and physical world.
- d. All of the above

- a.
- b.
- c.

9) How many components are there in PLM that are used to handle a product across its lifetime?

1 point

- a. 3
- b. 5
- c. 7
- d. 9

- a.
- b.
- c.
- d.

10) Which of the following statements is true about Augmented reality? 1 point

- a. It is a mixture of interactive hardware and software-based artificial environment.
- b. It creates and enhances an imaginary reality.
- c. It amplifies the present perception of reality.
- d. All of the above

- a.
- b.
- c.
- d.

11) What is projection-based AR? 1 point

- a. It gives outcomes by projecting light on real world surfaces.
- b. It substitutes the original view with of an object with the augmented view.
- c. It gives the output when a marker is detected.
- d. It is used for GPS-denied regions

- a.
- b.
- c.
- d.

12) Semi-immersive simulation is a type of

- a. AR
- b. VR
- c. Both a and b
- d. None of the above

- a.
- b.
- c.
- d.



13) Which of the following search methods is used by a computer program that does not use artificial intelligence?

- a. Heuristic
- b. Algorithmic
- c. Approximation
- d. None of the above

- a.
- b.

1:11 / 1:25

14) Select the correct statement.

- a. Artificial intelligence is a type of machine learning
- b. Deep learning is a subset of machine learning
- c. Deep learning cannot learn the features on its own.
- d. Machine learning is a subset of deep learning.

- a.
- b.
- c.
- d.

15) Which of the following statements is true about the GFS file system?

- a. It is based on the Hadoop Distributed File System
- b. It is a distributed file system that supports large-scale file system
- c. It is a centralized file management system
- d. It is a file system designed specifically for unstructured data management

- a.
- b.
- c.
- d.

WEEK 3 2024A

## Week 3 : Assignment 3

Assignment not submitted

Due date: 2024-02-14, 23:59 IST.

- 1) Which of the following is not a feature of Cyber-Physical Systems? 1 point
- a. Reactive Computation
  - b. Concurrency
  - c. Real-Time Computation
  - d. Standalone non-networked Computation
- a.  
 b.  
 c.  
 d.
- 2) In the context of CPS in Smart Grid, what is the full form of DAU? 1 point
- a. Data Aggregation Unit
  - b. Data Analytic Unit
  - c. Distributed Augmented Universe
  - d. Dedicated Accounting Unit
- a.  
 b.  
 c.  
 d.
- 3) Which of the following is not a component of CPS's "5C Architecture" for Industry 4.0? 1 point
- a. Connection
  - b. Conversion
  - c. Compatibility
  - d. Cognition
- a.  
 b.  
 c.  
 d.
- 4) What are the key parts enabling collaboration productivity in Industry 4.0? 1 point
- a. IT Proliferation, Single Source of Truth, Industrialization, Coordination
  - b. Financial Analysis, Market Research, Legal Compliance, Public Relations
  - c. Human Resources, Sales Targets, Customer Feedback, Advertising
  - d. Supply Chain Management, Quality Control, Cost Reduction, Branding
- a.
- 5) What does 'PLM' stand for in the context of Industry 4.0? 1 point
- a. Product Lifecycle Management
  - b. Public Liability Marketing
  - c. Professional Learning Modules
  - d. Personal Leadership Mastery
- a.

- 6) What does the Technique 'ABC' in PLM stand for? 1 point
- a. Activity Based Costing
  - b. Advanced Business Computing
  - c. Analytical Business Concepts
  - d. Automated Banking Coordination
- a.
- 7) In which fields are AR and VR used in Industry 4.0? 1 point
- a. Cooking and nutrition
  - b. Fashion design only
  - c. Machining, production, and education
  - d. Network Security
- a.  
 b.  
 c.
- 8) Which among the following is one type of categorization of AR? 1 point
- a. Marker-attached AR
  - b. Markerless AR
  - c. Null AR
  - d. Marker-like AR
- a.  
 b.
- 9) Who first coined the term "Augmented Reality"? 1 point
- a. Thamnos Caudell
  - b. Steve Jobs
  - c. Elon Musk
  - d. Mark Zuckerberg
- a.
- 10) What type of AR uses visual markers for outcomes? 1 point
- a. Marker-based Augmented Reality
  - b. Markerless Augmented Reality
  - c. Projection Based Augmented Reality
  - d. Superimposition Based Augmented Reality
- a.
- 11) What type of knowledge is used in AI techniques? 1 point
- a. Only historical data
  - b. Only factual information
  - c. Procedural, declarative, and heuristic knowledge
  - d. Limited to scientific formulas
- a.  
 b.  
 c.

12) What is the use of AI in IIoT?

1 point

- a. No use in IIoT
- b. Only for data storage
- c. Machine safety, efficient product lifecycle, efficient manufacturing processes, and others
- d. Limited to basic calculations

a.  
 b.  
 c.

13) Which of the following characterizes Big Data?

1 point

- a. Limited to textual data only
- b. Consists of structured and non-structured data
- c. Only includes numerical data
- d. Data that is always organized

a.  
 b.

14) What does a distributed file system in Big Data ensure?

1 point

- a. Inconsistency of data
- b. Unreliable data storage
- c. Consistency, accessibility, and fault tolerance of data
- d. Limited data access

a.  
 b.  
 c.

15) Suppose you write a program which uses an API to collect data continuously from LinkedIn and Facebook. You then wish to analyze such data. What type of big data source are you using?

1 point

- a. Internal data source
- b. External data source
- c. Complimentary data source
- d. All of the above

a.  
 b.