



**Introduction to
Internet of Things**

Assignment-Week

11

TYPE OF QUESTION: MCQ/MSQ

Number of questions: 15

Total marks: 15 X 1 = 15

QUESTION 1:

Which among the following is the most probable application scenario for a smart grid?

- a. Home automation
- b. Hospital networks
- c. Intelligent power plants**
- d. Crop monitoring

Correct Answer: c. Intelligent power plants

Detailed Solution: Refer Lecture 51@4:20.

QUESTION 2:

With respect to a smart grid, which stakeholders are potentially benefitted?

- a. Energy Service providers
- b. Energy consumers/customers
- c. Both energy service provides and consumers**
- d. Neither energy service providers nor consumers.



Correct Answer: c. Both energy service providers and consumers

Detailed Solution: Refer Lecture 51@13:20.

QUESTION 3:

It is not possible to perform load forecasting using a smart grid.

a. True

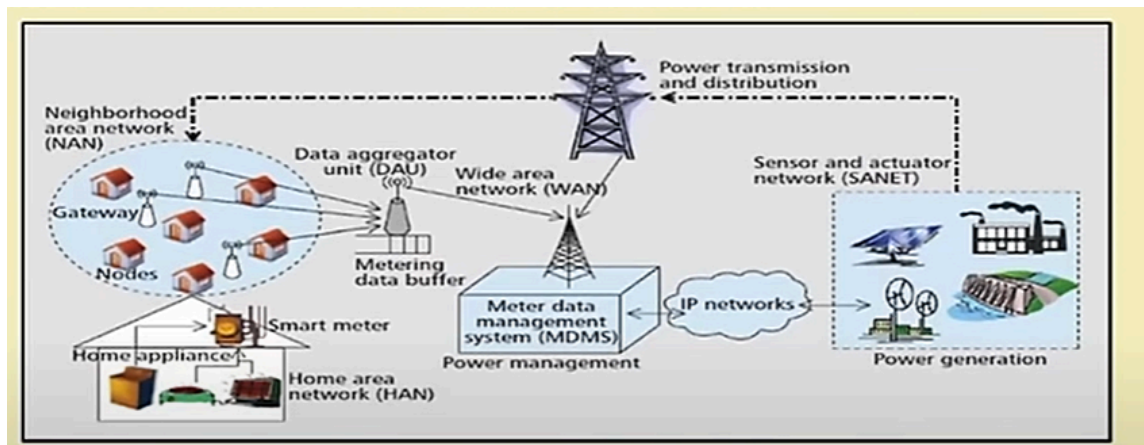
b. False

Correct Answer: b. False

Detailed Solution: Load forecasting is possible in a smart grid. Refer Lecture 51@22:00.

QUESTION 4:

With respect to the following Smart Grid architecture, which among the following is the most probable utility of the IP network?



- a. IP network has no utility
- b. IP network is used to connect smart grid components globally for seamless data transfer
- c. IP network is used for multimedia video streaming only
- d. IP network is used to induce more congestion

Correct Answer: b. IP network is used to connect smart grid components globally for seamless data transfer



NPTEL Online Certification Courses
Indian Institute of Technology Kharagpur





QUESTION 5:

Smart Home is an isolated concept and is not integrable with smart grid?

- a. **False**
- b. True

Correct Answer: a. False

Detailed Solution: Refer Lecture 51@28:01

QUESTION 6:

Which of the following is a cloud application of smart grid?

- a) Information management
- b) Energy management
- c) Security
- d) **All of these**

Correct Answer: d. All of these

Detailed Solution: Energy management, information management and security are all the cloud applications in smart grid (Please refer Lecture 52@21:55)

QUESTION 7:

Which of the following is not a vulnerability of Smart Grid?

- a) Integrity
- b) Physical threats



- c) Dynamic system attacks
- d) None of these

Correct Answer: d. None of these

Detailed Solution: Integrity, physical threats and dynamic system attacks are all the vulnerabilities of smart grids (Please refer Lecture 52@16:56)

QUESTION 8:

IIoT corresponds to which industrial revolution?

- a. 1st
- b. 2nd
- c. 3rd
- d. 4th

Correct Answer: d. 4th

Detailed Solution: Refer Lecture 53@10:00 onwards.

QUESTION 9:

IIoT is inherently data intensive.

- a. Yes
- b. No

Correct Answer: a. Yes



Detailed Solution: In IIoT, big data analytics plays an important part, hence it is inherently data intensive. Refer Lecture 53@16:28 onward.

QUESTION 10:

Which among the following is one of the requirements and utility of IIoT?

- a. Power plant interruption
- b. Power plant virtualization
- c. Power plant decentralization
- d. Power plant denotification

Correct Answer: b. Power plant virtualization

Detailed Solution: Refer Lecture 53@20:17.

QUESTION 11:

Smart Grid follows which type of flow of energy?

- a. Bidirectional
- b. Unidirectional
- c. Both a and b
- d. Neither a nor b

Correct Answer: a. Bidirectional



Detailed Solution: Smart grid follows bidirectional flow of energy. (Please refer Lecture 51@5:41)

QUESTION 12:

What is the Flow of data?

- a. Acquisition>Generation>Storage>Analysis
- b. Generation>Storage>Analysis>Acquisition
- c. Generation>Acquisition>Storage>Analysis
- d. None of these

Correct Answer: c. Generation>Acquisition>Storage>Analysis

Detailed Solution: The flow of the data is Generation, Acquisition, Storage and Analysis(Please refer Lecture 55@19:29)

QUESTION 13:

Intelligent transport system is least likely to render which of the following connectivity?

- a. Vehicle-to-vehicle connectivity
- b. Vehicle-to-sensor connectivity
- c. Vehicle-to-road infrastructure
- d. Vehicle-to-home connectivity

Correct Answer: d. Vehicle-to-home connectivity

Detailed Solution: ITS provides Vehicle-to-vehicle connectivity, Vehicle-to-sensor connectivity, Vehicle-to-road infrastructure and Vehicle-to-internet connectivity. (Please refer Lecture 54@4:19)

QUESTION 14:

Approximately around _____ of the total data available currently in the world is unstructured.



- a. 20 %
- b. 40 %
- c. 60 %
- d. 80%

Correct Answer: d. 80%

Detailed Solution: Unstructured data accounts for 80% of the total data available today in the world.
(Please refer Lecture 55@9:23)

QUESTION 15:

SQL manages _____ data.

- a) Unstructured
- b) Corrupt
- c) Structured
- d) Non-organized

Correct Answer: c. Structured

Detailed Solution: Refer Lecture 55@8:56.

*****END*****