Introduction to

Internet of Things

Assignment-Week

12

TYPE OF QUESTION: MCQ/MSQ

Number of questions: **15**   **Total marks: 15 X 1= 15**

QUESTION 1:

Qualitative analysis refers to the process by which numerical data is analyzed?

a. True

b. False

Correct Answer: b. False

Detailed Solution: Refer Lecture 56@2:46.

QUESTION 2:

Which of the following data analysis technique involve the use of study of difference of variance?

    a. ARIMA

    b. ANOVA

    c. DNN

    d. OpenFlow

Correct Answer: b. ANOVA

Detailed Solution: Refer Lecture 56@10:42 onward.

QUESTION 3:

Given that you have an independent variable and that you want to predict the dependent variable based on the relationship between the two variables. Which among the following technique would you use?

a.   ANOVA

b.   ARIMA

c.   Regression Analysis

d.   Pre-analysis

Correct Answer: c. Regression Analysis.

Detailed Solution: Refer Lecture 56@15:13 onwards.

QUESTION 4:

With respect to AgriSens, how many logical layers are there in its architecture?

    a.   Perception Layer

    b.   Processing Layer

    c.   Application Layer

    d.   All of the given

Correct Answer: d. All of the given

QUESTION 5:

AgriSens supports real-time monitoring of soil moisture conditions and instant reporting to a dashboard.

a.   False

b.   True

Correct Answer: b. True
Detailed Solution: Refer Lecture 57, practical AgriSens deployment.

QUESTION 6:

What is the data aggregator is also known as in the context of IoT in smart healthcare?

 a) CPU

 b) LPU

 c) APU

 d) PPU

Correct Answer: b.LPU

Detailed Solution: Refer Lecture 58@9:23.

QUESTION 7:

Fill in the blanks. The effect size for determining statistical significance is the standardized

_____ difference between two groups.

 a. Median

b. Mean

c. Inter quartile range

d. None of the above

Correct Answer: b. Mean

Detailed Solution: The effect size is the standardized mean difference between two groups.

(Please refer lecture Data Handling and Analytics- Part II @ 17:15)

QUESTION 8:

Processing the sensed data on the device itself is known as _____ approach.

a. Network based

b. In-place

c. Out of the place

d. None of these

Correct Answer: b. In-place

Detailed Solution: Processing the sensed data on the device itself is known as in-place

approach. (Please refer lecture Activity monitoring Case Study - I @ 20:19).

QUESTION 9:

Fill in the blank. Processing the handheld activity device data with artificial intelligence can be used for _____.

a. Fall detection

b. Heart rate detection

c. Vehicle detection

d. All of these

Correct Answer: a. Fall detection

Detailed Solution: Processing the handheld activity device data with artificial intelligence can be used for detecting sudden fall of a person. (Please refer Lecture 60@11:56)

QUESTION 10:

Which of the following is an assumption of ANOVA?

      a) Homogeneity of variances

      b) Normally distributed response variable

      c) Independence of observations

      d) All of these

Correct Answer: d) All of these

Detailed Solution: ANOVA assumes the following:

Homogeneity of variances: The variances within each group should be approximately equal.

Normality: The response variable should follow a normal distribution within groups.

Independence: Observations should be independent of each other. These assumptions are critical for the validity of ANOVA results. (Refer to Lecture 56 @ 12:30).

QUESTION 11:

Select the statement(s) that denote the type of ANOVA.

Statement I: One way analysis

Statement II: Two way analysis

Statement III: K-way analysis

a. Statement I

b. Statement II

c. Statements I, II, and III

d. None of these

Correct Answer: c. Statements I, II, and III

Detailed Solution: The types of ANOVA includes One way analysis, Two way analysis and K-way analysis (Please refer Lecture 56@11:57)

QUESTION 12:

AmbuSense is a privacy-aware system

a. True

b. False

Correct Answer: a. True

Detailed Solution: The AmbuSense is a strictly privacy-aware system with patient-identity masking. (Please refer Lecture 58@24:12)

QUESTION 13:

The two most relevant sensors directly used in agriculture are _____.

a.   Soil moisture and ECG sensor

b.   Soil moisture and water level sensor

c.   ECG sensor and water level sensor

d.   All of these

Correct Answer: b. Soil moisture and water level sensor

Detailed Solution: Soil moisture and water level sensors are the necessary sensors generally used in agriculture. (Please refer Lecture 57@13:11)

QUESTION 14:

Examples of dispersion measures include _____ and _____.

a. Discrete, categorical

b. Continuous, quantitative

c. Discrete, quantitative

d. Range, Variance

Correct Answer: d. Range, Variance

Detailed Solution: Examples of dispersion measures include Range and Variance (Please

refer Lecture 56@13:51)

QUESTION 15:

Suppose that your smartphone tilts by an angle of 15 degrees. Which among the following sensors will detect this tilt?

    a) HC-SR04

    b) Gyroscope

    c) Accelerometer

    d) Monometer

Correct Answer: b. Gyroscope

Detailed Solution: Refer Lecture 60@3:06.

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