Assignment 3

The due date for submitting this assignment has passed. **Due on 2018-02-28, 23:59 IST**

As per our records you have not submitted this assignment.

1) Method detection limit (MDL) can be determined by which of the following operation?  
\[ t = \text{one sided critical t-value} \]  
\[ n = \text{number of sample} \]  
\[ S = \text{standard deviation} \]  

- MDL = \( t(n-1, \alpha=0.99) \times S \)  
- MDL = \( t(n-1, \alpha=0.90) \times S \)  
- MDL = \( t(n, \alpha=0.99) \times S \)  
- MDL = \( t(n+1, \alpha=0.90) \times S \)

**No, the answer is incorrect.**  
**Score:** 0

**Accepted Answers:**  
\[ MDL = t(n-1, \alpha=0.99) \times S \]

2) In which of the following case, you can say that the obtained data set is probably normally distributed?  

- Arithmetic mean > standard deviation and variance  
- Arithmetic mean < standard deviation and variance  
- Arithmetic mean = standard deviation and variance  
- Arithmetic mean ≤ standard deviation and variance

**No, the answer is incorrect.**  
**Score:** 0

**Accepted Answers:**  
\[ \text{Arithmetic mean} > \text{standard deviation and variance} \]

3) To make the method detection limit (MDL) confident, how many number of samples should be taken according to EPA recommendation?  

- Greater than 10 samples  
- Greater than 5 samples  
- Greater than 7 samples  
- None of the above

**No, the answer is incorrect.**  
**Score:** 0

**Accepted Answers:**  
\[ \text{Greater than 7 samples} \]

4) Out of the following sample preparation processes for any analysis which are categorized as chemical preparation techniques?  

- Solvent extraction  
- Drying

**Accepted Answers:**  
\[ \text{Solvent extraction} \]  
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5) Which of the following chemicals are used in Toxicity characteristic leaching procedure (TCLP) test?

- Nitric acid
- Acetic acid
- Hydrochloric acid
- Sodium hydroxide
- Calcium Hydroxide

**No, the answer is incorrect.**

Score: 0

**Accepted Answers:**
- Solvent extraction
- Chemical oxidation

6) Which of the following statements are true?

- Large numbers of sample analysis are generally a good representative of the actual one.
- Small numbers of sample analysis are generally a good representative of the actual one.
- For heterogeneous sample, the required numbers of sample analysis is greater than homogeneous sample.
- For homogeneous sample, the required numbers of sample analysis is greater than heterogeneous sample.

**No, the answer is incorrect.**

Score: 0

**Accepted Answers:**
- Large numbers of sample analysis are generally a good representative of the actual one.
- For heterogeneous sample, the required numbers of sample analysis is greater than homogeneous sample.

7) What are the purpose of conducting life cycle assessment?

- Helps in making choices which have less impact on environment.
- Helps in making choices which provide more economic advantages.
- Helps in making choices which are good for society.
- Helps people and industrialists understand how they can make a difference by adopting more environment friendly products/processes.

**No, the answer is incorrect.**

Score: 0

**Accepted Answers:**
- Helps in making choices which have less impact on environment.
- Helps people and industrialists understand how they can make a difference by adopting more environment friendly products/processes.

8) Which elements are responsible for global warming?

- CO2
- HCl
- NO2
- CH4

**No, the answer is incorrect.**

Score: 0

**Accepted Answers:**
9) Use of Spectrophotometer in the analysis of colored sample will not create any problem. 1 point

- True
- False

No, the answer is incorrect.
Score: 0
Accepted Answers: False

10) While comparing between a wooden pencil vs a mechanical pencil on the basis of Life cycle assessment, both the pair of ‘writing and 20 pages of writing’ and ‘writing and 1 hour of writing’ can be chosen as ‘function and functional unit’. 1 point

- True
- False

No, the answer is incorrect.
Score: 0
Accepted Answers: True