Assignment 4

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment.

Statement 6: Absorption spectrometry can be used to find the concentrations of a star.
Accepted Answer:
Statement 6: True/False: Statement 6 is true.

3. The DLA is a single measurement tool. To get a DLA or DLA, the number of averages required is ________.
Accepted Answer:
No. The question is incorrect.
Correct Answer:
Type: Multiple Choice (5 options)

4. Suppose the number of consecutive samples in a row length averaging block. Choosing large N results in ________ DLA improvement and ________ DLA time.
Accepted Answer:
No. The question is incorrect.
Correct Answer:
Type: Multiple Choice (3 options)

5. Syntactic-Grammar flaw in syntax error is polynomial error. The choices of higher order and small window sizes go ________ with improvement and ________ with interchange.
Accepted Answer:
No. The question is incorrect.
Correct Answer:
Type: Multiple Choice (3 options)

6. Lock-in detection uses the manipulation of ________ to maximize the signal.
Accepted Answer:
No. The question is incorrect.
Correct Answer:
Type: Multiple Choice (5 options)

Questions 9 and 10 use the following information

A swelled signal of 10 mV, amplified and 18 Hz is fed to a low-pass amplifier with a gain of 10\(^2\) and input noise of 5.7 x 10\(^{-6}\) V/Hz. Suppose we need to design a filter to achieve DLA of 20 Hz.

5. The filter would require ________ bandwidths. (Input Round up to 2 decimal values)
Accepted Answer:
No. The question is incorrect. 
Correct Answer:
Type: Numerical (2 digits)

6. Quality factor of the filter would be ________. (Input Numerical value. For e.g. no. of Loo in low-sensitivities solutions 10)
Accepted Answer:
No. The question is incorrect. 
Correct Answer:
Type: Numerical (2 digits)

7. You are given the task of finding the speed of a rotating disc using the following setup. The disc contains a hole near the edge which allows light to pass through it. You have a laser diode to measure the speed of the disc. For each 1° rotation the disc passes through the laser, you measure the time it takes.

(a) You are given the task of finding the speed of a rotating disc using the following setup. The disc contains a hole near the edge which allows light to pass through it. You have a laser diode to measure the speed of the disc. For each 1° rotation the disc passes through the laser, you measure the time it takes.

(b) The number of detector elements required to realize the above speeds is ________.
Accepted Answer:
No. The question is incorrect. 
Correct Answer:
Type: Numerical (2 digits)

9. The spacing between two consecutive elements is ________ cm. (Input Round up to 2 decimal values)
Accepted Answer:
No. The question is incorrect. 
Correct Answer:
Type: Numerical (2 digits)

10. Suppose you can give the laser with the laser diode to measure the speed of the disc. For each 1° rotation the disc passes through the laser, you measure the time it takes.

(b) The number of detector elements required to realize the above speeds is ________
Accepted Answer:
No. The question is incorrect. 
Correct Answer:
Type: Numerical (2 digits)