

X

NPTEL

reviewer4@nptel.iitm.ac.in ▼

Courses » Machinery Fault Diagnosis And Signal Processing

Announcements

Course

Ask a Question

Progress

FAQ

## Unit 8 - Week 6

Register for Certification exam

### Course outline

How to access the portal

Week 0

Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

Lecture 26: Basics Of Instrumentation

Lecture 27: Signal Conditioning And Filtering

Lecture 28: Errors In Measurements

Lecture 29: Dynamic Range And Frequency Response

Lecture 30: Overview Of Transducers For Cbm

Week 6 : Lecture Material

Quiz : Assignment 6

Feedback for Week 6

Week 7

Week 8

Week 9

Week 10

Week 11

Week 12

DOWNLOAD VIDEOS

### Assignment 6

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

Due on 2019-03-13, 23:59 IST

1) Bias error can be reduced by?

1 point

- a. Calibration
- b. Averaging
- c. Both a. and b.
- d. None of these

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

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

2) Which is a dynamic measurement type?

1 point

- a. Measuring temperature in a room
- b. Vibration of an engine
- c. Both a. and b.
- d. None of these

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

No, the answer is incorrect.

Score: 0

Accepted Answers:

b.

3)

1 point

While performing dynamic measurements, it is desired that the frequency of the measured quantity is nowhere close to the natural frequency of the transducer. Is the above statement true?

- a. True
- b. False

- a.

© 2014 NPTEL - Privacy & Terms - Honor Code - FAQs -

A project of



In association with



Funded by



Powered by



What is the maximum voltage range of a bipolar signal of amplitude 5 V?

- a. 5 V
- b. 10 V
- c. 15 V
- d. 20 V

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

No, the answer is incorrect.

Score: 0

Accepted Answers:

b.

5)

What is the dynamic range for a transducer that can measure a bipolar signal of amplitude 5 V, if the amplitude resolution is 1.25 mV?

- a. 18 dB
- b. 72 dB
- c. 78 dB
- d. None

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

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.

6) What is the dynamic range for an ADC of bit size 3?

- a. 18 dB
- b. 72 dB
- c. 78 dB
- d. 88 dB

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

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

7) What is unit of charge sensitivity for an accelerometer?

- a. pC/ms
- b. pC/ms<sup>-2</sup>
- c. pC/ ms<sup>2</sup>
- d. None

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

No, the answer is incorrect.

Score: 0



1 point

1 point

1 point

Accepted Answers:

b.

8) 1 point

In Stroboscope, when the frequency of flashing light coincides with the speed of object, the object appears to be stationary. Is this true?

- a. True
- b. False

- a.
- b.

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

9) 1 point

Passing a signal through a high pass filter followed by low pass filter results in

- a. Low pass filtering
- b. High pass filtering
- c. Band pass filtering
- d. Removes a single frequency signal

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

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.

10) 1 point

Which is more suitable to be used at higher temperatures?

- a. Strain gauge-based accelerometer
- b. Piezoelectric accelerometer
- c. Linear variable displacement transducer
- d. None

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

No, the answer is incorrect.

Score: 0

Accepted Answers:

b.

11) 1 point

Which of these require an external power source?

- a. Condenser type microphone
- b. Prepolarized type microphone
- c. Piezoelectric accelerometer
- d. None of these

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

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

12) 1 point

Which among these is used for noncontact type temperature measurement?

- a. Thermocouples
- b. Resistance temperature detectors
- c. pyrometer
- d. None

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

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.

13) Which of these can be used to measure DC and AC current both?

1 point

- a. Inductive Current sensor
- b. Hall effect sensor
- c. Both a. and b.
- d. None of these

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

No, the answer is incorrect.

Score: 0

Accepted Answers:

b.

14) Which device can be used to measure percentage composition of chemical elements?

1 point

- a. Atomic emission spectrophotometer
- b. Atomic absorption spectrophotometer
- c. Both a. and b.
- d. None of these

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

No, the answer is incorrect.

Score: 0

Accepted Answers:

b.

15)

1 point

What is the suitable frequency range of sound waves for ultrasonic thickness measurement?

- a. 20 Hz to 20 kHz
- b. 20 kHz to 50kHz
- c. 50 kHz to 2 MHz
- d. None of these

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

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.

Previous Page

End

