Unit 9 - Week 7:

Week 7 Assignment 7

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

Due on 2019-03-20, 23:59 IST.

1) During transient motion an under-damped oscillator oscillates with frequency
   a. slightly less than undamped natural frequency
   b. slightly more than undamped natural frequency
   c. equal to undamped natural frequency
   d. equal to twice that of undamped natural frequency

   □ a.
   □ b.
   □ c.
   □ d.

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

2) Power Spectral Density is Fourier Transform of
   a. Probability density function
   b. Probability distribution function
   c. Cross correlation function
   d. Auto correlation function

   □ a.
   □ b.
   □ c.
   □ d.

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

To reduce the vibration of a circuit board

a. its size should be made small
b. its size should be made large
c. its mass should be made large
d. it should be cooled

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

4) For a linear oscillator

a. Force transmissibility and motion transmissibility are different
b. Force transmissibility is more than motion transmissibility
c. Force transmissibility and motion transmissibility are equal
d. Force transmissibility is less than motion transmissibility

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

5) A good vibration isolator must have

a. high damping for all frequency range
b. low damping for all frequency range
c. high damping in low frequency range but low damping in high frequency
d. low damping in low frequency range and high damping in high frequency

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

6) Rayleigh’s quotient is used to

a. derive equation of motion
b. estimate natural frequency
c. estimate damping coefficient
d. estimate power spectral density

- 2 points
7) If the free edge of a circuit board is clamped then
   a. its natural frequencies remain unchanged
   b. its natural frequencies increase
   c. its natural frequencies decrease
   d. its natural frequencies may increase or decrease

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

8) In an axially leaded component the natural frequency
   a. Varies linearly with the length of the wire
   b. Varies inversely linearly with the length of the wire
   c. Varies as square of the length of the wire
   d. Varies as cube of the length of the wire

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

9) The stiffness of a wire mounted electronic component can be determined by using
   a. Hamilton’s principle
   b. Rayleigh quotient
   c. Castigliano’s theorems
   d. Newton’s laws of motion

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   a.
Use of vibration isolator is effective when the transmissibility ratio is

a. Less than one
b. More than one
c. Equal to one
d. Infinite

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