

Unit 3 - Week 1: Introduction

Course outline

How does an NPTEL online course work?

Week 0 : Prerequisite

Week 1: Introduction

Lec 1: Origin of nonlinearities - 1

Lec 2: Origin of nonlinearities - 2

Quiz : Assignment 1

Feedback form

Lecture Notes

Week 2: Mathematical Preliminaries -1

Week 3: Mathematical Preliminaries - 2

Week 4: Kinematics - 1

Week 5: Kinematics - 2

Week 6: Kinetics - 1

Week 7: Kinetics - 2

Week 8: Hyperelasticity - 1

Week 9: Hyperelasticity - 2

Week 10: Linearization

Week 11: Discretization

Week 12: Solution Procedure

Live session

Assignment 1

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

Due on 2020-09-30, 23:59 IST.

1) An interdisciplinary area of study to gain knowledge and understanding of systems involving more than one simultaneously occurring physical fields is called problems.

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: String) multiphysics

1 point

2) In a linear system if the input is doubled then the output is

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: String) doubled

1 point

3) For a linear solid mechanics problem, which of the following relations need to be linear?

- (a) force - stress.
 (b) stress - strain.
 (c) strain displacement.
 (d) all of these.

No, the answer is incorrect.
Score: 0

Accepted Answers:
(d) all of these.

1 point

4) Choose True/False for the following assertion: "Nonlinear strain measures do not give correct result for small deformation problems for which linear strain measure should be used."

- (a) True
 (b) False

No, the answer is incorrect.
Score: 0

Accepted Answers:
(b) False

1 point

5) Choose True/False for the following assertion: "Hertz contact problem is a mildly nonlinear problem."

- (a) True
 (b) False

No, the answer is incorrect.
Score: 0

Accepted Answers:
(b) False

1 point

6) Choose True/False for the following assertion: "Kinematic nonlinearity occurs at the boundary."

- (a) True
 (b) False

No, the answer is incorrect.
Score: 0

Accepted Answers:
(a) True

1 point

7) Choose True/False for the following assertion: "Material nonlinearity occurs in the domain."

- (a) True
 (b) False

No, the answer is incorrect.
Score: 0

Accepted Answers:
(a) True

1 point

8) Choose True/False for the following assertion: "Material nonlinearity is handled globally while the kinematic nonlinearity is handled locally."

- (a) True
 (b) False

No, the answer is incorrect.
Score: 0

Accepted Answers:
(b) False

1 point