

Unit 2 - Week 1

Course outline

How does an NPTEL online course work?

Week 1

- Tribology & Its Classification
- Friction Tribology
- Wear & Corrosion

Lubrication

Effect of Tribology on Surface of Nanomaterials

Quiz : Assignment 1

Solution for Assignment 1

Week 2

Week 3

Week 4

Week 5

Week 6

Week 7

Week 8

Download Videos

Feedback

Text Transcripts

Assignment 1

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

Due on 2020-02-12, 23:59 IST.

All are compulsory

1) How is tribological knowledge of machines helpful in daily life? 1 point

- Improves service life of machines
- Yields substantial economic benefits
- Safety and reliability of interacting machine components
- All of these

No, the answer is incorrect.
Score: 0

Accepted Answers:
All of these

2) What is the meaning of the word 'Tribo'? 1 point

- To cut
- To elongate
- To rub
- To reduce

No, the answer is incorrect.
Score: 0

Accepted Answers:
To rub

3) Which factors affecting the force of friction? 1 point

- Materials and nature of surfaces in contact
- Force acting between the two surfaces
- Both (a) and (b)
- None of these

No, the answer is incorrect.
Score: 0

Accepted Answers:
Both (a) and (b)

4) Unit of wear coefficient (k) is? 1 point

- mm³/sec
- mm³/N-m
- Dimensionless
- mm³/N

No, the answer is incorrect.
Score: 0

Accepted Answers:
Dimensionless

5) Which one of the following is a localized form of corrosion by which cavities or "holes" are produced in the material? 1 point

- Pitting corrosion
- Crevice corrosion
- Inter-granular corrosion
- Galvanic corrosion

No, the answer is incorrect.
Score: 0

Accepted Answers:
Pitting corrosion

6) Which of the following is not right about the additives? 1 point

- Corrosion inhibitors form a protective film on a surface to prevent the corrosion
- Friction and wear of a material can be reduced by addition of friction modifiers
- Detergent dispersers are designed to control the deposit formation
- Antioxidants create large bubbles to delay the onset of oxidative degradation

No, the answer is incorrect.
Score: 0

Accepted Answers:
Antioxidants create large bubbles to delay the onset of oxidative degradation

7) Which additive is used to minimize oxidative degradation? 1 point

- Foam depressants
- Antioxidants
- Detergent Dispersers
- Friction modifiers

No, the answer is incorrect.
Score: 0

Accepted Answers:
Antioxidants

8) Which device is used to measure the wear, friction and lubrication of a material? 1 point

- Tribometer
- Sonicator
- Centrifuge
- Viscometer

No, the answer is incorrect.
Score: 0

Accepted Answers:
Tribometer

9) What is PVD? 1 point

- Powder vapour deposition
- Physical vapour deposition
- Phase vapour deposition
- Physical diode dielectric

No, the answer is incorrect.
Score: 0

Accepted Answers:
Physical vapour deposition

10) Which of the following statements is not true about the surface metallurgy method? 1 point

- In the case-hardening method, a thin layer of harder metal is formed at the outer surface
- In ion implantation process parts are built layer by layer in the powder bed
- In the laser melting process, a thin layer of metal powder is selectively melted by a laser and built up a layer by layer in the powder bed
- The compressive residual stresses produced in the shot peening process modify the mechanical properties of metals

No, the answer is incorrect.
Score: 0

Accepted Answers:
In ion implantation process parts are built layer by layer in the powder bed