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**NPTEL** (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » **Fundamentals of Surface Engineering: Mechanisms, Processes and Characterizations (course)**

Announcements (announcements)

**About the Course** ([https://swayam.gov.in/nd1\\_noc19\\_me69/preview](https://swayam.gov.in/nd1_noc19_me69/preview)) Ask a Question (forum)

Progress (student/home) Mentor (student/mentor)

## Unit 5 - Week 4

### Course outline

#### How to access the portal

#### Week 1

#### Week 2

#### Week 3

#### Week 4

- Surface damage: Abrasive wear I (unit? unit=26&lesson=27)
- Surface damage: Abrasive wear II (unit? unit=26&lesson=28)
- Surface damage: Erosive wear (unit? unit=26&lesson=29)

## Assignment No. 4

The due date for submitting this assignment has passed. **Due on 2019-08-28, 23:59 IST.**  
As per our records you have not submitted this assignment.

1) Crushing of abrasive particles occurs during

**1 point**

- Low stress three body abrasion
- Open two body abrasion
- Erosive wear
- High stress three body abrasion

No, the answer is incorrect.

Score: 0

Accepted Answers:

*High stress three body abrasion*

2) Gouging wear involves

**1 point**

- Abrasion and impact of abrasive particles
- Only impact of abrasive particles
- Crushing of abrasive particles
- Diffusion of elements from abrasive particles

No, the answer is incorrect.

Score: 0

Accepted Answers:

*Abrasion and impact of abrasive particles*

3) Work hardening behavior of materials in ascending order will be

**1 point**

Surface damage: Melting wear and corrosive wear (unit? unit=26&lesson=30)

Surface damage: Diffusive wear and evaluation of surface damage (unit? unit=26&lesson=31)

**Quiz : Assignment No. 4 (assessment? name=98)**

Solution for Assignment No. 4 (unit? unit=26&lesson=111)

**Week 5**

**Week 6**

**Week 7**

**Week 8**

**Week 9**

**Week 10**

**Week 11**

**Week 12**

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- Ag, Fe, Co, Al
- Al, Fe, Co, Ag
- Ag, Al, Fe, Co
- Al, Fe, Ag, Co

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*Ag, Al, Fe, Co*

4) Attrition of tough/strong abrasives indicates **1 point**

- High wear of abrasives
- No wear of abrasives
- Gradual wear of abrasives
- Creation of sharp edges of abrasives

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*Gradual wear of abrasives*

5) Factor affecting erosive wear is **1 point**

- Angle of impact
- Particle size & shape
- Mechanical properties of substrate material
- All of the above

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*All of the above*

6) High erosive wear in brittle material is caused by **1 point**

- High impact angle & low velocity
- Low impact angle & high velocity
- High impact angle & high velocity
- Low impact angle & low velocity

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*High impact angle & high velocity*

7) Wear rate will be maximum in **1 point**

- Mild oxidation wear
- Severe oxidation wear
- Delamination wear
- Melt wear

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*Melt wear*

8) Surface layer damage due to impingement of high pressure waves through bursting of bubbles is known as **1 point**

- Corrosion
- Erosion
- Abrasion
- Cavitation

No, the answer is incorrect.

Score: 0

Accepted Answers:

*Cavitation*

9) Diffusive wear occurs when there is

**1 point**

- Sufficient time
- High temperature
- Direct metallic intimacy
- All of the above conditions

No, the answer is incorrect.

Score: 0

Accepted Answers:

*All of the above conditions*

10) Chemistry of damaged surface during adhesive wear of steels can be evaluated by

**1 point**

- XRD analysis
- LVDT
- EPMA/EDAX
- All of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

*EPMA/EDAX*