

Course outline

How does an NPTEL online course work?

Week-01

Week-02

Week-03

Week-04

Week-05

Week-06

Week-07

Week-08

Week-09

Week-10

● Lecture 22- Electrical Properties of Nanomaterials (I)

● Lecture 23- Electrical Properties of Nanomaterials (II)

● Lecture 24- Magnetism in the Nanomaterials

○ Quiz: Week 10: Assignment 10

● Week-10: Assignment-10 Solution

● Feedback for Week 10

Week-11

Week- 12

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# Week 10: Assignment 10

The due date for submitting this assignment has passed.

**Due on 2021-10-06, 23:59 IST.**

As per our records you have not submitted this assignment.

1) Ionic polarization

1 point

- decreases with temperature
- increases with temperature
- may increase or decrease with temperature
- is independent of temperature

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*is independent of temperature*

2) In the polarization versus field strength plot for a ferroelectric crystal, Ps stands for

1 point

- space charge polarization
- saturation polarization
- spontaneous polarization
- none of these

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*spontaneous polarization*

3) During melting, the relative dielectric constant

1 point

- always increases
- always decreases
- may increase or decrease
- none of these

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*may increase or decrease*

4) With increase in temperature, the orientation polarization in general

1 point

- increases
- decreases
- is constant
- none of these

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*decreases*

5) Among the common dielectric materials, the highest dielectric strength is possessed by

1 point

- mica
- transformer oil
- PVC
- polyethylene

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*mica*

6) The temperature of the antiferromagnetic-to-paramagnetic transition is called

1 point

- antiferromagnetic Curie temp.
- Curie-Weiss temp.
- Neel temp.
- Debye temp

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*Neel temp.*

7) The transition from the ferromagnetic to the paramagnetic state is named after

1 point

- Curie
- Curie-Weiss
- Neel
- Debye

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*Curie*

8) The Curie temperature of cobalt is

1 point

- 2000 K
- 1400 K
- 1040 K
- 650 K

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*1400 K*

9) To increase the mechanical strength of an Al conductor, we can use

1 point

- solute strengthening
- cold working
- doping
- steel reinforcement

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*steel reinforcement*

10) The magnetization of a superconductor is

1 point

- 0
- B
- 1
- H

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*-H*