Unit 10 - Week 8 - Non-mechanical properties & Laboratory demonstration

Assignment 8

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

1) Which one of the following properties do not belong to diamagnetic materials?
   a) No magnetic dipole in the absence of a magnetic field.
   b) Magnetic susceptibility is positive.
   c) Depolarize moments are aligned opposite to external field direction.
   d) Magnetization arises only when an external field is applied.
   No, the answer is incorrect.
   Resolve:
   Accepted Answers:
   Magnetic susceptibility is positive.

2) Permanent magnets are usually made up of
   a) Nickel-Aluminum-Nickel alloy
   b) Aluminum alloy
   c) Wrought iron
   d) Very rare iron
   No, the answer is incorrect.
   Resolve:
   Accepted Answers:
   Aluminum alloy

3) For transmitting the electrical energy over a long distance, the general preferred material is
   a) Copper
   b) Sheet wrought aluminum
   c) Aluminum reinforced copper
   d) Aluminum reinforced close wire
   No, the answer is incorrect.
   Resolve:
   Accepted Answers:
   Aluminum reinforced close wire

4) A material has a refractive index of 2.5. If light is falling normal from a glass sheet of refractive index 1.5, what will be the approximate refractive index of a single pass through the material?
   a) 0.512
   b) 0.625
   c) 0.058
   d) 0.058
   No, the answer is incorrect.
   Resolve:
   Accepted Answers:
   0.512

5) In order to increase the electrical conductivity of a metal, the preferred method is
   a) Increase the vibration level
   b) Decrease the temperature
   c) Increase the temperature
   d) Decrease the vibration level
   No, the answer is incorrect.
   Resolve:
   Accepted Answers:
   Decrease the temperature

6) Piezoelectric materials are used for generating
   a) Microwaves
   b) Ultrasonic waves
   c) Musical waves
   d) Laser waves
   No, the answer is incorrect.
   Resolve:
   Accepted Answers:
   Ultrasonic waves

7) Print the letter which is not related to the high absorption mechanism.
   a) Tyndall Effect
   b) Compton Scattering Effect
   c) Photoelectric Effect
   d) Polarization Effect
   No, the answer is incorrect.
   Resolve:
   Accepted Answers:
   Polarization Effect

8) Light travels from air into an optical fiber with an index of refraction of 1.44. Thus, in which direction does the light bend? If the 45° angle of incidence on the fiber is 22°, what is the angle of refraction inside the fiber?
   a) Bonds towards the normal and 15 degree
   b) Bonds towards the normal and 22 degree
   c) Bonds away from the normal and 15 degree
   d) Bonds away from the normal and 25 degree
   No, the answer is incorrect.
   Resolve:
   Accepted Answers:
   Bonds towards the normal and 15 degree

9) Which of the following accounts for the major signal loss inside an optical fiber?
   a) Radiative loss
   b) Scattering loss
   c) Absorption loss
   d) Mode-bending loss
   No, the answer is incorrect.
   Resolve:
   Accepted Answers:
   Scattering loss

10) The highest value of thermal conductivity is expected for
   a) Graphite
   b) Solid KOH
   c) Melting ice
   d) Water
   No, the answer is incorrect.
   Resolve:
   Accepted Answers:
   Solid KOH