Assignment 3

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

1. Main form of ceramic deposition is by
   - Corrosion
   - Weathering
   - Dissolution
   - Sublimation
   No, the answer is incorrect. Score: 0
   Accepted Answer: Dissolution

2. Diamond cutting tools not recommended for machining of ferrous metals due to
   - High thermal conductivity of workpiece.
   - High local hardness.
   - Chemical affinity of tool material with iron.
   - Poor hot strength.
   No, the answer is incorrect. Score: 0
   Accepted Answer: Chemical affinity of tool material with iron.

3. Which one of the following cast irons consists of carbon in matrix form?
   - White cast iron
   - Grey cast iron
   - Malleable cast iron
   - Nodular cast iron
   No, the answer is incorrect. Score: 0
   Accepted Answer: Nodular cast iron

4. Admiralty brass used for steam condenser tubes contains copper and zinc in the following ratio
   - 15:90
   - 35:65
   - 75:25
   - 90:10
   No, the answer is incorrect. Score: 0
   Accepted Answer: 75:25

5. The eutectic slugs from high to low temperature in Iron-Carbon phase diagram is
   - Perlitic, Austenite, Ferritic, pearlitic, Martensite
   - Perlitic, Austenite, Ferritic, Ferritic-Austenitic
   - Austenite, Ferritic, Martensite
   - Perlitic, Austenitic, Ferritic
   No, the answer is incorrect. Score: 0
   Accepted Answer: Perlitic, Austenitic, Ferritic

6. An alloy that has yield strength 125 MPa. It has an average grain size of 30µm. The Hall constant indicating resistance to dislocation is 70 MPa. If the grain size is reduced to 100 µm, what will be the new yield strength based on Hall-Petch relation?
   - 255 MPa
   - 115 MPa
   - 155 MPa
   - 195 MPa
   No, the answer is incorrect. Score: 0
   Accepted Answer: 255 MPa

7. Zincation-ionizing in machinery that is best achieved by means of base structure made of
   - Low carbon steel
   - Ductile cast iron
   - Grey cast iron
   - White cast iron
   No, the answer is incorrect. Score: 0
   Accepted Answer: Grey cast iron

8. Which of the following is false about Filming - Backworth rail?
   - Rails greater than two indicators an protective layer
   - Provides indication about the protectiveness of oxide layer
   - In the case of volume of metal corroded in the oxidation to the volume of the oxide formed.
   - Ratio being less than usual indicates thicker oxide in oxide film.
   No, the answer is incorrect. Score: 0
   Accepted Answer: Ratio being less than usual indicates thinner oxide in oxide film.

9. Work hardening strength is alloy by
   - Removing internal defects in the crystal structure.
   - Increasing the dislocation density.
   - Decreasing the grain size of alloy.
   - Increasing the lattice resistance to dislocation motion.
   No, the answer is incorrect. Score: 0
   Accepted Answer: Increasing the lattice resistance to dislocation motion.

10. The correct sequence of elements of 18/8 Stainless steel is
    - 18% Chromium and 8% Nickel
    - 18% Chromium and 8% Nickel
    - 18% Stainless steel and 8% Chromium
    - 18% Chromium and 9% Nickel
    No, the answer is incorrect. Score: 0
    Accepted Answer: 18% Chromium and 8% Nickel