Assignment 1

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

All are compulsory

1. How is tribological knowledge of materials helpful in design?  
   - Improve service life of machines  
   - Reduce substantial economic savings  
   - Safety and reliability of interesting machine components  
   - All of these

No, the answer is incorrect.  
Score: 0  
Accepted Answer:  
All of these

2. What is the meaning of the word "friction"?  
   - To stop  
   - To move  
   - To reduce  

No, the answer is incorrect.  
Score: 0  
Accepted Answer:  
To reduce

3. Which factors affect the force of friction?  
   - 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 Answer:  
Both (a) and (b)

4. Unit of shear coefficient (or shear stress)  
   - mm²/μm  
   - N/m²  
   - Dimensionless  
   - None of these

No, the answer is incorrect.  
Score: 0  
Accepted Answer:  
Dimensionless

5. Which one of the following is a geometric form of contact, by which cavities or "holes" are produced in the material?  
   - Pitting corrosion  
   - Crevice corrosion  
   - Inter-granular corrosion  
   - Sulphate corrosion

No, the answer is incorrect.  
Score: 0  
Accepted Answer:  
Pitting corrosion

6. Which of the following is not right about the additives?  
   - 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 dispersants are designed to control the deposit formation  
   - Antioxidants create anti-wear barriers to delay the onset of oxidative degradation

No, the answer is incorrect.  
Score: 0  
Accepted Answer:  
Antioxidants create anti-wear barriers to delay the onset of oxidative degradation

7. Which additives are used to prevent oxidative degradation?  
   - Foam depressants  
   - Antioxidants  
   - Detergent dispersants  
   - Friction modifiers

No, the answer is incorrect.  
Score: 0  
Accepted Answer:  
Antioxidants

8. Which device is used to measure the wear, friction, and lubrication of a material?  
   - Torsion meter  
   - Brinell  
   - Vickers  
   - None of these

No, the answer is incorrect.  
Score: 0  
Accepted Answer:  
Vickers

9. What is PVD?  
   - Powder vapour deposition  
   - Physical vapour deposition  
   - Plasma vapour deposition  
   - None of these

No, the answer is incorrect.  
Score: 0  
Accepted Answer:  
Physical vapour deposition

10. Which of the following statements is not true about the surface metaturgy method?  
    - The surface hardening method, a thin layer of harder metal is formed on the outer surface  
    - The heat treatment process parts are built up by layers in the powder bed  
    - In the laser melting process, a thin layer of metal powder is successively melted by a laser and built up as a laser beam  
    - No compressive residual stresses produced in the heat treatment process modify the mechanical properties of materials

No, the answer is incorrect.  
Score: 0  
Accepted Answer:  
In the heat treatment process parts are built layer by layer in the powder bed.