Assignment 2

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

1) The material removal from contacting surfaces involves:
   - wear due to relative motion
   - motion due to application of torque to the leading system
   - all of the above
   Accepted Answers
   all of the above
   Score: 0
   No, the answer is incorrect.

2) Choose appropriate example from the following where wear is not desirable:
   - writing with pencil
   - machining
   - shaving
   - bearings
   Accepted Answers
   - machining, shaving
   Score: 0
   No, the answer is incorrect.

3) Choose conformal contact from the following:
   - flat bottom pin on flat
   - flat bottom block on ring
   - ball on disc
   - round bottom pin on flat
   Accepted Answers
   - flat bottom pin on flat
   Score: 0
   No, the answer is incorrect.

4) Under 10kN normal load, a conical bronze pin of radius 1 mm rests on a steel disk at a mean radius of 25 mm. When the disk rotates at 500 rpm for 10 hours, mass losses of the disk and pin are found to be 4 mg and 50 mg, respectively. The densities of bronze and steel are 8.6 g/cm³ and 7.8 g/cm³, respectively. The hardness values for bronze and steel are 3.8 GPa and 2.6 GPa, respectively. The wear coefficient of steel disk (up to 1 decade) is ............ (10^-4).
   Accepted Answers
   - 10^-4
   No, the answer is incorrect.
   Score: 0
   Accepted Answers
   - 10^-4
   No, the answer is incorrect.

5) As per the indentation fracture mechanism, the minimum load required for a ceramic material in a pin-on-disk contact is 1 N. If the fracture toughness is increased by 1.8 times and the hardness decreased by 0.8 times, the minimum load (in N) required for fracture in the same contact (up to 1 decade) is ...........
   Accepted Answers
   - 10^-4
   No, the answer is incorrect.
   Score: 0
   Accepted Answers
   - 10^-4
   No, the answer is incorrect.

6) Choose correct combination for abrasive wear condition:
   - I. slag, material
   - II. chipped out wear parts
   - III. blade material
   Accepted Answers
   - I, II
   Score: 0
   No, the answer is incorrect.

7) Choose the correct combination(s) for severe corrosive wear resistant material:
   - I. tough and extremely hard
   - II. low elastic modulus
   - III. extremely tough and less hard
   Accepted Answers
   - I, II
   Score: 0
   No, the answer is incorrect.

8) Adhesion contribution to friction will be:
   - larger for self-mated couple
   - larger for dissimilar material couple
   - smaller for self-mated couple
   - independent of material combination
   Accepted Answers
   - larger for self-mated couple
   Score: 0
   No, the answer is incorrect.