Assignment 1

This lab data submission for this assignment has passed. 
As per our records you have not submitted this assignment.

1) A machine tool which is removing material but with poor surface finish during machining (ie. lack of top quality finishers or greased surfaces) can be safeguarded with:

   A) Improper component
   B) Operational component without performing the intended function
   C) Operational component with permitting safety
   D) All of above

   Accepted Answer:
   Operational component without performing the intended function

2) Loss of material from the surface of a hydraulically driven gear is due to:

   A) Wear
   B) Groove
   C) Vibration
   D) All of above

   Accepted Answer:
   Groove

3) A systematic failure analysis of a failed sheet component requires input from:

   A) A design engineer
   B) A manufacturing engineer
   C) A maintenance engineer
   D) All of above

   Accepted Answer:
   All of above

4) During turning of low carbon steel bar on a lathe machine, the indicator of failure of machine tool can be:

   A) Poor surface finish
   B) Tool wear
   C) Excessive power consumption
   D) All of above

   Accepted Answer:
   All of above

5) A proper design criteria can be established through:

   A) Re-assembling of components in appropriate manner
   B) Manufacturing the component carefully
   C) Manufacturing the service conditions
   D) Predicting the possible magnitudes of failure

   Accepted Answer:
   All of above

6) The detrimental effect of stress concentration during uniaxial loading of a small component will be maximum in:

   A
   B
   C
   D

   Accepted Answer:
   C

7) Reduction in stress concentration due to bending of mesh tips can occur in:

   A) Ductile metals
   B) Brittle metals
   C) Both ductile and brittle metals
   D) All of above

   Accepted Answer:
   Both ductile and brittle metals

8) Under dynamic loading conditions, the micro-constituents in the material will be most harmful if their aspect ratio is:

   A) Greater than 8.5
   B) Less than 5.5
   C) Equal to 1.5
   D) Not related to aspect ratio

   Accepted Answer:
   Greater than 8.5

9) Quenching and tempering of heat-treatable Cr-Ni steel results in:

   A) Poor combination of strength and impact toughness
   B) Good combination of strength and impact toughness
   C) Poor strength and good impact toughness
   D) All of above

   Accepted Answer:
   All of above

10) Improper stress arcs can contribute to failure due to:

    A) Inability to estimate magnitude of load
    B) Inability to estimate the type of load
    C) Complex geometry
    D) All of above

   Accepted Answer:
   All of above