Machine design questions and answers

1 . the ultimate strength of steel in tension in comparison to shear is the ratio of :

A . 1:1

B . 2;1

C . 3 :2

D . 2 : 3

Ans c

2. the permissible stress of carbon under static loading in kg/cm^2___ **is**

A . 2000 : 3000

B . 3000 : 4000

C . 4000 : 4500

D . 5000 : 6000

Ans c

3. the property of a material which enables to to resist fracture due to high impact is known as :

A . elasticity

B . strength

c. endurance

d . toughness

ans d

4. a hot short metal is :

A . brittle when cold

b. brittle when hot

c . brittle under all conditions

d. hard

ans b

5 . rankine's theory of failure is applied for the following materials

A . brittle

b. ductile

c . elastic

d. hard

ans a

6. brittle coating technique is used for :

a. experimental stress analysis

b. destructive test

c. deterring brittleness

d. non destructive test metals

ans a

7 . the endurance limit of a material of finished surface in comparison with rough surface is :

A . more

B .same

C .less

D . more or less

Ans a

8 . the endurance limit is always depends on

A .strength

B . temperature

c. hardness

d . stiffness

ans . b

9 . the endurance limit of carbon steel is always depends on :

A . surface finish

b. temperature

c. element size

d . all of the above

ans . d

10. stress concentration in static loading is more serious in ;

a. ductile materials

b .brittle materials

c . equally serious in both cases

d. non of the above

ans b

12. stress concentration in cyclic loading is more serious in :

A . brittle materials

B . ductile

C . both

D ., equally serious

Ans . b

13. the notch angle of the izod imact test specimen in degree is :

a. 10

b.20

c.30

d. 45

ans d

14 . in testing material for endurance strength it is subjected to :

A . static loading

B . dynamic loading

C .static loading as well as dynamic loading

D . non of the above

Ans c

15 . if the material fails bellow its yield point , failure would be due to :

A . straining

B . fatigue

c. creep

d. sudden impact

ans b

16 . cold working :

A . increases the fatigue strength

b. surface strength

c. hardness

d . fatigue limit

ans a