

MULTIPLE CHOICE

1. A treatment of the surface iron-based alloys, usually in the front of sheet strip is:

a. epoxy painting

b. bluing

c. sanding

d. coating

ANS: B

PTS: 1

DIF: Easy
2. An element assembled into a tapped hole is

a. key

b. nut

c. screw

d. worm gear

ANS: C

PTS: 1

DIF: Easy
3. After hot working, a stress caused by reduced hydrogen solubility is

a. residual stress

b. galling

c. pitting

d. flaking

ANS: D

PTS: 1

DIF: Easy
4. The procedure of heating to and holding metal at a designated temperature for a period of time and then cooling it at a controlled rate is

a. annealing

b. quenching

c. tempering

d. normalizing

ANS: C

PTS: 1

DIF: Easy
5. In the design of mechanical members, the separation that takes place along in the direction of the highest shearing stress is

a. ductile fracture

b. fatigue stress

c. residual stress

d. torsional stress

ANS: A

PTS: 1

DIF: Easy
6. It is a square key with the bottom two corners are beveled

a. Saddle key

b. Barth key

c. Woodruff key

d. Grib head key

ANS: B

PTS: 1

DIF: Easy
7. Change in metal structure by which the surface structure recovers from its unstable condition

a. Annealing

b. Normalizing

c. Aging

d. Tempering

ANS: C

PTS: 1

DIF: Easy
8. It is the ability of the material to absorb energy within its proportional limit

a. yield strength

b. resilience

c. toughness

d. creep strength

ANS: B

PTS: 1

DIF: Easy
9. In kinematics, the occurrence of linear and rotational motion simultaneously is known as

a. mechanism

b. rotakinetics

c. corioli's

d. Grashof's

ANS: C

PTS: 1

DIF: Easy
10. The ratio of the number of teeth to the pitch diameter is

a. circular pitch

b. mechanical advantage

c. diametral pitch

d. Lewi's form factor

ANS: C

PTS: 1

DIF: Easy
11. A new hacksaw blade should not be used in old cut because

a. the blade is very costly

b. the blade have very sharp teeth

c. the space is not sufficient to play the new blade in the old cut

d. none of the above

ANS: C

PTS: 1

DIF: Easy

12. Which of the file is not hardened?
- Tang
 - Body
 - Heel
 - Point
- ANS: A PTS: 1 DIF: Easy
13. In case of a flat scraper, the depth of the cut is verified by
- changing the convexity of the cutting edge
 - changing the inclination
 - changing its weight
 - none of the above
- ANS: B PTS: 1 DIF: Easy
14. In which screw thread the side = width of the flat = width of the space = 0.5p
- Knuckle
 - Square
 - Buttress
 - ACME
- ANS: B PTS: 1 DIF: Easy
15. 18-8' stainless steel means
- 18 % Tungsten and 8 % Chromium
 - 18 % Nickel and 8 % Chromium
 - 18 % Chromium and 8 % Nickel
 - 18 % Chromium and 8 % Cobalt
- ANS: C PTS: 1 DIF: Easy
16. Which is the lightest metal?
- Lead
 - Aluminum
 - GI Sheet
 - Cast iron
- ANS: B PTS: 1 DIF: Easy
17. Hardened steel parts have
- Fine grains
 - Medium grains
 - Coarse grains
 - None of the above
- ANS: A PTS: 1 DIF: Easy
18. Concentricity of an outside diameter can be checked by
- Vernier caliper
 - Dial test indicator
 - Outside micrometer
 - Tube micrometer
- ANS: B PTS: 1 DIF: Easy
19. Which micrometer has no anvil?
- outside micrometer
 - screw thread micrometer
 - depth micrometer
 - digit micrometer
- ANS: C PTS: 1 DIF: Easy
20. Which micrometer is available with extension rods?
- outside micrometer
 - screw thread micrometer
 - inside micrometer
 - combi micrometer
- ANS: C PTS: 1 DIF: Easy
21. Which gauge is used to check the internal threads?
- plug gauge
 - thread plug gauge
 - ring gauge
 - thread ring gauge
- ANS: B PTS: 1 DIF: Easy
22. The radial distance between the bottomland and the pitch circle is
- clearance
 - dedendum
 - addendum
 - working depth
- ANS: B PTS: 1 DIF: Easy
23. A mechanical element connected directly in the prime mover is
- axle
 - spindle
 - line shaft
 - transmission shaft
- ANS: C PTS: 1 DIF: Easy

24. A spur gear with infinite radius is also known as
- herringbone gear
 - helical gear
 - rack gear
 - bevel gear
- ANS: C PTS: 1 DIF: Easy
25. An engineering material which contains a mixture of pure iron and 1 to 3 % slag is known as
- stainless steel
 - killed steel
 - wrought steel
 - pig iron
- ANS: C PTS: 1 DIF: Easy
26. In bolt design, the maximum load a bolt can withstand is
- ultimate load
 - resultant bolt load
 - permissible bolt load
 - proof of load
- ANS: D PTS: 1 DIF: Easy
27. A forced shaft with a rotating pulley known as
- Cantilever beam
 - Axle shaft
 - Line shaft
 - Transmission shaft
- ANS: B PTS: 1 DIF: Easy
28. The effect of alloying zinc to copper is
- to increase hardness
 - to impart free-machining properties
 - to hardness and strength
 - to increase strength and ductility
- ANS: D PTS: 1 DIF: Easy
29. Unlike materials or materials of different thickness can be butt welded by
- control of pressure and current
 - adjusting time duration of current
 - adjust initial gap
 - all of the above
- ANS: A PTS: 1 DIF: Easy
30. The purpose of inoculation is
- To clean the casting
 - To change the chemical composition of a cast metal
 - To decrease melting temperature of a cast metal
 - To modify structure and properties of a cast metal
- ANS: D PTS: 1 DIF: Easy
31. Spiral bevel and hypoid gears should, in general be mounted on anti-friction bearings in an/ a _____ case
- water light
 - oil light
 - soluble light
 - rubber light
- ANS: B PTS: 1 DIF: Easy
32. The maximum theory of failure the elastic limit of a ductile ferrous material in shear is practically _____ its elastic limit in tension
- one-half
 - three-halves
 - three-fourths
 - four-thirds
- ANS: A PTS: 1 DIF: Easy
33. Is largely used for low strength applications such as elevator ropes not used to hoisting and for stationary guy ropes
- steel rope
 - cast steel rope
 - nylon rope
 - iron wire rope
- ANS: D PTS: 1 DIF: Easy
34. In actual machines
- Mechanical advantage is unity
 - Mechanical advantage is less than unity
 - Mechanical advantage is less than velocity ratio
 - Mechanical advantage is equal to velocity ratio
- ANS: C PTS: 1 DIF: Easy

35. The limiting force of friction is equal to
- The value of friction force that stops the movement of the body
 - The value of friction force that cannot exceed under a given situation
 - The friction force when the body is just about to move
 - The friction force acting on a body when it is in motion
- ANS: C PTS: 1 DIF: Easy
36. If the only force acting on two bodies is their mutual interactions and if both bodies start from rest, the distance travelled by each
- Proportional to the masses of the bodies
 - Inversely proportional to the masses of the bodies
 - Inversely proportional to the square of the masses of the bodies
 - Directly proportional to the square of the masses of the bodies
- ANS: B PTS: 1 DIF: Easy
37. In majority of machine members the damping capacity of the material should be
- low
 - zero
 - high
 - could be anything
- ANS: C PTS: 1 DIF: Easy
38. A behavior of metals where in strength of metal is increased and ductility is decreased on heating at a relatively low temperature after cold working is called
- twinning
 - solid solution hardening
 - clustering
 - strain aging
- ANS: D PTS: 1 DIF: Easy
39. It is a machine used for the testing of very thin steel or surface layers.
- Charpy test
 - Description test
 - Izod test
 - Rockwell test
- ANS: D PTS: 1
40. The machine, which can flatter surface on horizontal, vertical or angular plane.
- drilling machine
 - lathe machine
 - power saw
 - shaper machine
- ANS: D PTS: 1 DIF: Easy
41. A machine tool, which is very similar to a shaper except the ram reciprocals vertically rather that horizontally
- Lathe
 - Grinder
 - Planer
 - Slotter
- ANS: D PTS: 1 DIF: Easy
42. The operation of enlarging a hole by means of an adjustable cutting tool with only one cutting edge.
- Boring
 - Broaching
 - Drilling
 - Milling
- ANS: A PTS: 1 DIF: Easy
43. It is used to true and align machine tools fixtures and works is at and inspect size trueness of finished work, and to compare measurements either heights or depths or many other measurements
- Dial Gage
 - Dial Indicator
 - Tachometer
 - Speedometer
- ANS: B PTS: 1 DIF: Easy
44. A tool used for measuring diameters.
- Caliper
 - Manometer
 - Tachometer
 - Pyrometer
- ANS: A PTS: 1 DIF: Easy
45. A process of forming metals by the use of dies after the metal is forced to its plastic range.
- Casting
 - Forging
 - Rolling
 - Turning
- ANS: C PTS: 1 DIF: Easy

46. When using a drill press, the work should be held with
- the hand
 - a gloved hand
 - a vise or clamp
 - pliers
- ANS: C PTS: 1 DIF: Easy
47. If the angle on a drill is less than 59 deg.:
- the drill will make a large hole
 - the drill will make a smaller hole
 - the hole will take longer to drill and more power is required to drive the drill
 - the drill will not center properly
- ANS: C PTS: 1 DIF: Easy
48. If a drill speed is too great, it will:
- cut faster
 - lose its temper
 - cut slower
 - not cut
- ANS: B PTS: 1 DIF: Easy
49. Chuck used on turret lathe is
- collet chuck
 - four jaw self centering chuck
 - Magnetic Chuck
 - Three jaw independent chuck
- ANS: D PTS: 1 DIF: Easy
50. Pipe is measured by:
- inside diameter
 - outside diameter
 - thickness of wall
 - wire gage
- ANS: A PTS: 1 DIF: Easy
51. Tubing is measured by:
- inside diameter
 - outside diameter
 - thickness of wall
 - wire gage
- ANS: B PTS: 1 DIF: Easy
52. A product of puddling furnace which contains less than 0.104 carbon, is called
- cast iron
 - gray cast iron
 - pig iron
 - wrought iron
- ANS: D PTS: 1 DIF: Easy
53. A lathe machine threading mechanism is called
- anvil
 - changed stud gear
 - reverse gear and lever
 - spindle gear
- ANS: D PTS: 1 DIF: Easy
54. The process of lengthening a piece of stock while the cross-sectional area is being reduced
- Drawing
 - Honing
 - Tapping
 - Upsetting
- ANS: A PTS: 1 DIF: Easy
55. process of cutting internal threads by means of a cutting tool
- Chamfering
 - Honing
 - Reaming
 - Tapping
- ANS: D PTS: 1 DIF: Easy
56. A tool used for turning nuts or bolts
- C-clamps
 - Long nose
 - Plier
 - wrench
- ANS: D PTS: 1
57. Soft solder is made of
- copper and zinc
 - tin and lead
 - tin and copper
 - tin and zinc
- ANS: B PTS: 1 DIF: Easy

58. Hard solder is made of:

- | | |
|--------------------|-------------------|
| a. copper and zinc | c. tin and copper |
| b. tin and zinc | d. tin and lead |

ANS: A

PTS: 1

DIF: Easy

59. The process of checking the surface of a piece by rolling depressions into the surface

- | | |
|-------------|-------------|
| a. honing | c. reaming |
| b. knurling | d. snagging |

ANS: B

PTS: 1

DIF: Easy

60. Removing the sharp edges from a piece of stock is referred to as

- | | |
|---------------|-------------|
| a. knurling | c. planning |
| b. chamfering | d. turning |

ANS: B

PTS: 1

DIF: Easy