

MET-12

1. Forming is a process that changes the shape of the metal by changing its phase.
a) **True**
b) False
2. Which of the following components is mainly manufactured by performing metal forging?
a) Piston
b) Engine block
c) **Connecting rod**
d) Crankcase
3. Which of the following metal forming processes performs squeezing out of material through a hole?
a) Forging
b) Rolling
c) Drawing
d) **Extrusion**
4. Metal forming is a process in which the metal is deformed plastically to get into the desired shape.
a) **True**
b) False
5. Which of the following manufacturing processes is mainly considered for producing the components of very high strength?
a) **Casting**
b) Forging
c) Extrusion
d) Rolling
6. Rolling is a forming process in which thickness of the metal plate is decreased by increasing its length.
a) True
b) False
7. Which of the following metal forming processes is best suitable for making the wires?
a) Forging
b) Extrusion
c) **Drawing**
d) Rolling

8. Cold working is generally carried out
- a) Below melting point
 - b) Above recrystallization temperature
 - c) At room temperature**
 - d) Cryogenic temperature
9. How does hot working affect grain structure?
- a) Refines it**
 - b) Distorts it
 - c) Warps it
 - d) Has no effect
10. Which of the following is an application of hot working?
- a) Shapes the metal**
 - b) Finishing
 - c) Thinning of material
 - d) Dimensional accuracy
11. Which of the following is a drawback of cold working?
- a) Oxide formation**
 - b) Surface scaling
 - c) Decarburization
 - d) Low ductility
12. Which of the following is a hot working process?
- a) Stamping
 - b) Squeezing
 - c) Forging**
 - d) Bending
13. What is the hot rolling temperature of mild steel?
- a) 200 °C
 - b) 450 °C
 - c) 1000 °C**
 - d) 1200 °C
14. Cold forging is done for
- a) Improving strength and hardness**
 - b) Adding forging scale
 - c) Eliminating carburization
 - d) Rough surface finish

15. Which of the following is a characteristic of hot rolling?
- a) Refines grain structure
 - b) Economic
 - c) Slow speed**
 - d) Uniform size
16. _____ involves hammering of heated bars inside closed impression dies.
- a) Press forging
 - b) Drop forging**
 - c) Hammer forging
 - d) Upset forging
17. In forging process, metals are shaped by _____
- a) impact**
 - b) cohesion
 - c) tense
 - d) none of the mentioned
18. Which method is considered as one of the oldest methods of giving required shapes to the metals ?
- a) casting
 - b) forging**
 - c) forming
 - d) none of the mentioned
19. Which of the following is the example of impact pressure forging?
- a) striking a blow**
 - b) shaping by press
 - c) all of the mentioned
 - d) none of the mentioned
20. Which type of forging is done by deforming the metal at room temperature?
- a) cold forging**
 - b) simply forging
 - c) hot forging
 - d) all of the mentioned
- 21 . Which type of forging is done by blacksmith?
- a) hand forging**
 - b) machine forging
 - c) both hand forging and machine forging
 - d) none of the mentioned

22. For which purpose, hand forging is used?
- a) maintenance work
 - b) production of small articles tools
 - c) repair work
 - d) all of the mentioned**
23. In which forging process, parts are heated in open hearth?
- a) machine forging
 - b) hand forging**
 - c) both hand forging and machine forging
 - d) none of the mentioned
24. In which forging process, parts are heated in closed hearth?
- a) machine forging**
 - b) hand forging
 - c) hand forging and machine forging both
 - d) none of the mentioned
25. Roll forging is done with the help of _____
- a) cylindrical rolls
 - b) semi-cylindrical roll**
 - c) both cylindrical and semi cylindrical rolls
 - d) none of the mentioned
26. In which of the following forging operation no special die is used?
- a) Drop forging
 - b) Smith forging**
 - c) Coining
 - d) Press forging
27. In which of the following forging operation repeated hammering and closed die is used?
- a) Drop forging**
 - b) Smith forging
 - c) Coining
 - d) Press forging
28. In which of the following forging operation instead of repeated hammering gradual force is applied?
- a) Drop forging
 - b) Smith forging
 - c) Coining
 - d) Press forging**

29. Coining and forming are two special kinds of which forging operation?
- a) Upset
 - b) Press**
 - c) Hubbing
 - d) Swaging
30. Which of the following forging operation is used for parts having uniform cross section?
- a) Upset
 - b) Press
 - c) Hubbing
 - d) Swaging**
31. Heading is a kind of which forging operation?
- a) Piercing
 - b) Embossing
 - c) Upsetting**
 - d) Coining
32. Which operation is used in making raised figures on sheets with its corresponding relief on the other side?
- a) Roll forging
 - b) Embossing**
 - c) Coining
 - d) Heading
33. Which of the following operation is used to make ball bearing?
- a) Skew rolling**
 - b) Roll forging
 - c) Press forging
 - d) Upsetting
34. The castings in formed in foundry produced are accurate in dimensions.
- a) True
 - b) False**
35. Which of the following is an advantage of the Green sand molding process used in a Foundry?
- a) Appropriate for long production run
 - b) Very low cost process
 - c) Sand is reusable
 - d) All of the mentioned**
35. The _____ energy consumption is a drawback of the foundry.
- a) High**

- b) Optimum
- c) Intensive
- d) Low

36. _____ defects in castings cannot be identified easily.

- a) Internal**
- b) External
- c) Chemical
- d) Metallic

37. Castings are usually designed for _____ distribution of loads.

- a) Equal**
- b) Unequal
- c) Maximum
- d) Minimum

38. Foundry process is used to make intricate parts.

- a) True**
- b) False

39. Which kind of resistance is experienced in upset butt welding?

- a) Electric resistance**
- b) Magnetic resistance
- c) Thermal resistance
- d) Air resistance

40. Which of the following can be easily be welded from flash butt welding process?

- a) Tin
- b) Lead
- c) Cast irons
- d) Carbon steel**

41. Electrodes used in spot welding are made up of which material?

- a) Only Copper**
- b) Copper and tungsten
- c) Copper and chromium
- d) Copper and aluminium

42. Which machine tool is known as the mother machine tool?

- a) drill
- b) milling
- c) lathe**
- d) none of mentioned

43. Lathe is primarily used for producing ____ surfaces.
- a) flat
 - b) curve
 - c) taper
 - d) none of the mentioned**
44. Which type of surface is produced by turning operation in lathe machine?
- a) flat
 - b) cylindrical**
 - c) taper
 - d) none of the mentioned
45. What is the necessary condition for turning?
- a) material of work piece should be harder than the cutting tool
 - b) cutting tool should be harder than the material of work piece**
 - c) hardness of the cutting tool and material of of piece should be same
 - d) none of the mentioned
46. Traversing of tool parallel to the axis of job is termed as _____
- a) cross feed
 - b) longitudinal feed**
 - c) both cross feed and traversing feed
 - d) none of the mentioned
47. Which type of feed is needed in facing operation?
- a) longitudinal
 - b) cross**
 - c) both cross and longitudinal
 - d) none of the mentioned
48. Which type of surface is produced in facing operation?
- a) cylindrical
 - b) taper
 - c) flat**
 - d) none of the mentioned
49. In taper operation, which type of surface is produced?
- a) flat
 - b) curve
 - c) circular
 - d) none of the mentioned**
50. In lathe work, when the tool is fed parallel to the rotation of job work, it will produce
- a) Cylindrical surface**
 - b) Spherical surface

- c) Tapered surface
- d) All of the above

51. The following type of Lathe is operated through Cams and Cam plate.

- a) Precision Lathe
- b) Crankshaft Lathe
- c) **Screw cutting Lathe (Automatic)**
- d) Duplicating Lathe

52. The following part of Lathe serves as housing for the driving pulleys and back gears

- a) **Head stock**
- b) Tail stock
- c) Bed
- d) Carriage

53. In Lathe, the back gears are used for affecting _____ in spindle speeds, thereby facilitating wider range of speeds

- a) Increase
- b) Reduction
- c) Increase or reduction
- d) None of the above

54. The following acts as driving shaft in Lathe.

- a) Countershaft
- b) Spindle shaft
- c) Lead screw
- d) None of the above

55. The Lathe carriage serves the following purpose of the tool

- a) Guiding
- b) Feeding
- c) Supporting
- d) All of the above

56. Which of the following operation, we can't perform on drilling machine?
- a) reaming
 - b) tapping
 - c) lapping
 - d) none of the mentioned**
57. Tapping attachment is included in _____ method of tool holding devices.
- a) by chucks
 - b) by a sleeve
 - c) by directly fitting in the spindle
 - d) none of the mentioned
58. Which of the following method is not used for holding tool?
- a) by a sleeve
 - b) by chucks
 - c) by a socket
 - d) none of the mentioned
59. The drilling machine was primarily designed to originate a _____
- a) flat surface
 - b) cylindrical surface
 - c) taper surface
 - d) none of the mentioned
60. For drilling operation, the drill rotates with _____ pressure if job is held on earth.
- a) upward
 - b) downward
 - c) 45 degree inclined to both planes
 - d) none of the mentioned
61. Which of the following is used for machining larger jobs?
- a) shaper
 - b) planer
 - c) can't say anything
 - d) none of the mentioned
62. Which of the following is used for machining smaller jobs?
- a) shaper
 - b) planer
 - c) can't say anything
 - d) none of the mentioned
63. Which of the following operation can be performed in shaper?
- a) gear cutting
 - b) keyways cutting
 - c) curvilinear contours
 - d) all of the mentioned

64. In shaper, the job is kept_____
- a) stationary
 - b) rotating
 - c) reciprocating
 - d) none of the mentioned
65. Which stroke is cutting stroke in shaper?
- a) forward
 - b) return
 - c) can't say anything
 - d) none of the mentioned
66. Which stroke is idle stroke in shaper?
- a) forward
 - b) return
 - c) can't say anything
 - d) none of the mentioned
67. At the end of one cycle, job is given a feed motion_____ to the direction of tool movement.
- a) parallel
 - b) perpendicular
 - c) anti-parallel
 - d) none of the mentioned
68. Which of the following machine is primarily intended for producing flat surfaces?
- a) shaper
 - b) drilling
 - c) lathe
 - d) none of the mentioned
69. Grinding wheel is specified as "A 46 K 5 B 17". Grain size of a wheel will be
- a) Coarse
 - b) Medium
 - c) Fine
 - d) Very Fine
70. Operation done to make periphery of grinding wheel concentric with its axis to recover its lost shape is known as
- a) Loading
 - b) Glazing
 - c) Dressing
 - d) Trueing

71. Removing dull grains in order to make grinding wheel sharp is known as
- a) Loading
 - b) Glazing
 - c) Dressing
 - d) Trueing
72. Grain number of grinding wheel is ____ to grain size.
- a) Directly proportional
 - b) Inversely proportional
 - c) Does not depend
 - d) None of the mentioned
73. Which of the following is a correct range for grain number of the grinding wheel for coarse grains?
- a) 220-600
 - b) 80-180
 - c) 30-60
 - d) 10-24
74. Which of the following grinding machine will give a better result for rough machining?
- a) Fine grain
 - b) Very fine grain
 - c) Coarse grain
 - d) None of the mentioned
75. Which of the following grinding machine will give a better result for finish machining operation?
- a) Fine grain
 - b) Medium grain
 - c) Coarse grain
 - d) None of the mentioned
76. Which of the following symbol's range of alphabet represent soft grain in grinding wheel?
- a) A – H
 - b) I – P
 - c) Q – T
 - d) T – Z
77. Which of the following symbol's range of alphabet represent medium hardness grain in grinding wheel?
- a) A – H
 - b) I – P
 - c) Q – T
 - d) T – Z
78. Which of the following symbol's range of alphabet represent hard grain in grinding wheel?
- a) D – H

- b) I – P
- c) A – D
- d) Q – Z

79. Shaping can be performed more effectively by _____ milling machine.
- a) horizontal
 - b) vertical
 - c) can't say anything
 - d) none of the mentioned
80. Surfacing can be performed more effectively by _____ milling machine.
- a) horizontal
 - b) vertical
 - c) can't say anything
 - d) none of the mentioned
81. Form cutting can be performed more effectively by _____ milling machine.
- a) horizontal
 - b) vertical
 - c) can't say anything
 - d) none of the mentioned
82. Slab milling can be performed more effectively by _____ milling machine.
- a) horizontal
 - b) vertical
 - c) can't say anything
 - d) none of the mentioned
83. Drilling can be performed more effectively by _____ milling machine.
- a) horizontal
 - b) vertical
 - c) can't say anything
 - d) none of the mentioned
84. Boring can be performed more effectively by _____ milling machine.
- a) horizontal
 - b) vertical
 - c) can't say anything
 - d) none of the mentioned
85. Angular milling can be performed more effectively by _____ milling machine.
- a) horizontal
 - b) vertical
 - c) can't say anything
 - d) none of the mentioned

86. Cutting T-slots can be performed more effectively by _____ milling machine.

- a) horizontal
- b) vertical
- c) can't say anything
- d) none of the mentioned

87. Slotting can be performed more effectively by _____ milling machine.

- a) horizontal
- b) vertical
- c) both horizontal and vertical
- d) none of the mentioned

89. Consumable electrode is used in the process of

- a) Laser welding
- b) MIG welding
- c) TIG welding
- d) Thermit welding

90. The process of converting metallic powders into articles of definite form is known as

- a) Cold rolling
- b) Drawing
- c) Powder metallurgy
- d) Soldering

91. Dressing is the process of

- a) disposing the grinding wheel as it no longer useful
- b) changing the shape of the grinding wheel
- c) removing the metal loading and breaking away the glazed surface of the grinding wheel
- d) adding excess abrasive grains on the grinding wheel

92. Following material is used for coating of electrodes

- a) Slag
- b) Flux
- c) Deoxidant
- d) Protective layer

93. The metal powder used in Thermit welding of steel is

- a) Aluminium
- b) Copper
- c) Lead
- d) Tungsten

94. Following gases are used in Tungsten Inert Gas Welding.

- a) Argon and Helium
- b) CO₂ and H₂
- c) Helium and Neon
- d) Argon and Neon

95. Which of the following is not a part of carriage of the centre lathe?

- a) Tool post
- b) Apron
- c) Compound rest
- d) Gear box controls

96. Which characteristic of material is used in forging process?

- a) characteristics of elasticity of material
- b) characteristics of ductility of material
- c) characteristics of plasticity of material
- d) none of the above