

164/2014

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. Which type of rule is used for marking and measuring patterns and hot jobs handled by blacksmith :  
(A) Narrow rule (B) Shrink rule  
(C) Hook rule (D) Short rule
2. Which of the following is not the part of a combination set?  
(A) Stock (B) Protractor head  
(C) Square head (D) Centre head
3. To convert the linear motion of the plunger of a dial test indicator to the rotary motion of the pointer, which one of the following mechanisms is used :  
(A) Quick return mechanism (B) Rack and pinion mechanism  
(C) Screw thread mechanism (D) Hydraulic mechanism
4. To get least count 5 minute in a vernier bevel protractor, the  $23^\circ$  main scale are divided into :  
(A) 12 equal parts on vernier scale (B) 22 equal parts on vernier scale  
(C) 24 equal parts on vernier scale (D) 25 equal parts on vernier scale
5. The angle which is less than  $90^\circ$  is called as :  
(A) obtuse angle (B) acute angle  
(C) right angle (D) none of the above
6. Which one of the following instrument is used for checking large internal diameters?  
(A) Small hole gauge (B) Telescopic gauge  
(C) Plug gauge (D) Snap gauge
7. As per Indian standard a special set of slip gauge is used consisting of :  
(A) 81 pieces (B) 130 pieces  
(C) 120 pieces (D) 112 pieces
8. Which one of the following is used to rectify damaged or rusted threads?  
(A) Die nut (B) Circular split die  
(C) Two-piece die (D) Die plate

9. The ratio between the difference in diameters of taper and its length is known as :
- (A) Concentricity (B) Conicity  
(C) Convexity (D) Concavity
10. Buttress threads are most commonly used for :
- (A) Transmission of motion  
(B) Special bolts and units in structural work  
(C) Positioning of mechanical parts  
(D) Resisting force exerted in one direction only
11. A split pin is used for locking purpose in :
- (A) Castle nut (B) Square nut  
(C) Check nut (D) Flanged nut
12. While threading on lathe, the carriage is moved by means of :
- (A) Feed rod (B) Hand wheel  
(C) Lead screw (D) Gear train on a rack
13. Which one of the following belt fasteners is used for heavy duty machines?
- (A) Wire type (B) Lagrelle type  
(C) Jackson type (D) Alligator type
14. The file card is used :
- (A) to clean the file teeth (B) to avoid file slip  
(C) to clean the job (D) to renew the teeth of files
15. Draw filing is done :
- (A) to remove a file mark (B) before using a smooth file  
(C) for better finishing (D) to file high spots
16. The bench vice spindle has :
- (A) V-Threads (B) Acme threads  
(C) Square threads (D) Knuckle threads
17. What is the pitch of the screw of the spindle of the external micrometer?
- (A) 0.01 mm (B) 0.1 mm  
(C) 0.5 mm (D) 0.05 mm

18. Which of these instrument is used to check the concentricity of the outside diameter?  
(A) Vernier caliper (B) Micrometer  
(C) Dial gauge (D) Radius gauge
19. The least count of the metric vernier caliper is :  
(A) 0.02 mm (B) 0.01 mm  
(C) 0.002 mm (D) 0.001 mm
20. To convert inches into millimeters :  
(A) multiply by 25.4 (B) divide by 25.4  
(C) multiply by 2.54 (D) add 25.4
21. Trammel is used for :  
(A) marking parallel lines (B) marking very small circles  
(C) marking long radi and circles (D) none of these
22. Which angle is not to be changed while drill grinding?  
(A) To rake (B) Lip clearance  
(C) Point angle (D) Helix angle
23. Percentage of carbon in pig-iron :  
(A) 0.9 to 1.7% (B) 3 to 5%  
(C) 0.05 to 1.7% (D) 1.7 to 2.1%
24. The instrument used to measure higher temperature in furnaces :  
(A) Thremometer (B) Barometer  
(C) Calorimeter (D) Pyrometer
25. The depth of a 1S 'V' Thread should be :  
(A) 0.61 P (B) 0.64 P  
(C) 0.6 P (D) 0.62 P
26. B.S.F threads are used for :  
(A) aero parts (B) ordinary nut bolt  
(C) lathe screw (D) electrical goods

27. Thickness of a hexagonal nut is :
- (A) equal to the core diameter of the bolt
  - (B) equal to the nominal diameter of the bolt
  - (C) equal to three fourth diameter of the bolt
  - (D) equal to twice the diameter of the bolt
28. The shape of woodruff key is :
- (A) rectangular without a taper
  - (B) square with taper
  - (C) round with taper
  - (D) half round on its profile, with an even width and thickness
29. An example of an antifriction bearing is :
- (A) a footstep bearing
  - (B) a split bearing
  - (C) a roller bearing
  - (D) a plumber block
30. A union is used in a pipe line :
- (A) to separate the connection without disturbing the unit
  - (B) to make a line branch at right angles
  - (C) to provide another channel
  - (D) to stop the flow of a liquid in the line
31. The device fitted on micrometer to ensure uniform pressure between the measuring faces of the micrometer while measuring :
- (A) Anvil
  - (B) Thimble
  - (C) Locking device
  - (D) Ratchet stop
32. The process mild steel coated with zinc is called :
- (A) Zinking
  - (B) Tinning
  - (C) Galvanizing
  - (D) None of these
33. The act of joining the slip gauges together while building up to sized :
- (A) Shifting
  - (B) Gauging
  - (C) Clamping
  - (D) Wringing

34. \_\_\_\_\_ nuts are used to protect the bolt ends, threads from damages and they also act as protectors for safe working.
- (A) Knurled-nuts (B) Cap-nuts  
(C) Wing-nuts (D) Self locking-nuts
35. \_\_\_\_\_ is used to measure the effective diameter of screw threads.
- (A) Screw pitch gauge (B) Screw thread plug gauge  
(C) Screw thread caliper gauge (D) Screw thread micrometer
36. The most commonly used rivet for structural work :
- (A) counter sunk head (B) pan head  
(C) flat head (D) snap head
37. \_\_\_\_\_ type springs are used in manufacture of writing pad clips.
- (A) Helical torsion spring (B) Helical tension spring  
(C) Conical disc spring (D) Flat spring
38. Zinc is obtained from the ore :
- (A) Pyrites (B) Calamine  
(C) Cassiterite (D) Malachite
39. \_\_\_\_\_ is used for holding or gripping large diameter pipes.
- (A) Pipe wrench (B) Chain wrench  
(C) Strap wrench (D) Foot print wrench
40. \_\_\_\_\_ is most suitable method for finding hardness of soft metal.
- (A) Brinell hardness testing method (B) Vicker hardness  
(C) Rockwell hardness testing (D) Shore hardness testing
41. The temperature at which the oil catches fire and continues to be in flame :
- (A) Viscosity (B) Flash point  
(C) Fire point (D) Pour point
42. Quick return mechanism adopted in :
- (A) Radial drilling machine (B) Milling machine  
(C) Surface grinding machine (D) Shaping machine

43. A Jockey pulley is fitted :
- (A) near the driver pulley on the slack side
  - (B) near the driver pulley on the driving side
  - (C) near the driver pulley on the driving side
  - (D) none of these
44. The gear used in "index-head gear mechanism" :
- (A) Bevel gear
  - (B) Hypoid gear
  - (C) Rack and pinion
  - (D) Worm and worm gear
45. Grey cast iron has :
- (A) low compression strength
  - (B) medium compression strength
  - (C) high compression strength
  - (D) high tensile strength
46. The distance a drill moves into the work with each revolution of the spindle is called :
- (A) speed of a drill
  - (B) cutting speed of a drill
  - (C) depth of the drill
  - (D) feed of a drill
47. Determining taper angle using sine bar :
- (A)  $\frac{\text{height of slip gauge}}{\text{length of sine bar}}$
  - (B)  $\frac{\text{length of sine bar}}{\text{height of slip gauge}}$
  - (C) length of sine bar  $\times$  height of slip gauge
  - (D) none of these
48. The peen of the straight peen hammer is :
- (A) bent towards the handle
  - (B) perpendicular to the handle
  - (C) angular to the handle
  - (D) parallel to the handle
49. A ferrule is fixed in the handle of a file :
- (A) for fancy
  - (B) to grip the file
  - (C) to prevent the wooden handle from damage
  - (D) for the safety of the file

50. The type of chisel used for cutting grooves and key ways :
- (A) flat chisel (B) cross cut chisel  
(C) round nose chisel (D) diamond point chisel
51. The term zero error in the micrometer means :
- (A) it is a true micrometer  
(B) the zero mark is not visible  
(C) the zero do not exactly coincide  
(D) there is a negligible gap between the micrometer spindle and the anvil
52. To relieve the internal stresses, hardened tools are generally :
- (A) cooled suddenly (B) tempered  
(C) annealed (D) normalized
53. The lead of a screw thread can be calculated by the formula :
- (A)  $2 \times \text{pitch}$  (B)  $\text{Depth} \times \text{no. of starts}$   
(C)  $\text{Pitch} \times \text{no. of starts}$  (D)  $\text{Pitch} \times \text{depth of thread}$
54. A fast pulley is that which :
- (A) runs rapidly (B) runs independently  
(C) has 'V' shaped grooves (D) is fastened to the shaft
55. An oxy-acetylene flame where oxygen has higher volume than acetylene is known as :
- (A) Carburizing flame (B) Neutral flame  
(C) Oxidizing flame (D) Gas cutting flame
56. Soft metal particles that clogged in the pores of grinding wheel is called :
- (A) glazing (B) loading  
(C) dressing (D) truing
57. One micron is equal to :
- (A) 0.1 mm (B) 0.01 mm  
(C) 0.001 mm (D) 0.0001 mm
58. Fullers are used for :
- (A) necking and grooving (B) forming the heads of rivet, bolts etc  
(C) making shoulders with right angles (D) drawing down