

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° 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° 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

59. Parallel blocks are used for :
(A) marking parallel lines along an angle (B) levelling machine tools
(C) cutting parallel keyways (D) setting workpieces horizontal
60. The difference between the maximum limit of size and the minimum limit of size is called :
(A) Upper deviation (B) Basic size
(C) Tolerance (D) Actual size
61. A chemical compound of carbon with iron is called :
(A) ferrite (B) pearlite
(C) cementite (D) austenite
62. The process of heating and cooling for changing the structure of steel for obtaining the required properties is called :
(A) hardening (B) heat treatment
(C) normalising (D) tempering
63. The necessity of tack welding in a joint is to :
(A) join two pieces of plates (B) join two pieces of pipes
(C) control distortion during welding (D) eliminate spatters
64. The driving plates are used for :
(A) mounting fixtures with work pieces (B) rotating shafts between centres
(C) facing operations only (D) for internal operation only
65. If you turn the face of an irregularly shaped work piece, mount the piece :
(A) in a mandrel (B) between centres
(C) on the face plate (D) in a three jaw chuck
66. _____ is used for closing the edges of the plates and heads of the rivets to form a metal-to-metal joint.
(A) Caulking tool (B) Dolly
(C) Fullering tool (D) Soft hammer
67. _____ is used to support head of the rivet which is already formed and also to prevent damage to the shape of the rivet head.
(A) anvil (B) stakes
(C) dolly (D) caulking tool

68. In standard marking of a grinding wheel '51 – A46H5V8'. Letter 'H' represents :
(A) Structure (B) Type of bond
(C) Grain size (D) Grade
69. To check and set the spark plug gaps and tappet clearance in an engine :
(A) feeler gauge (B) snap gauge
(C) plug gauge (D) inside caliper
70. The depth of the tooth space of a gear below the pitch circle is called :
(A) addendum (B) dedendum
(C) centre distance (D) crest
71. Which among the following joints is suitable for roofing work?
(A) lap joint (B) butt joint
(C) hinged joint (D) double grooved seam joint
72. Interchangeability is normally applied for :
(A) repairing of parts (B) mass production
(C) single piece production (D) all the above
73. In the BIS system of limits and fits, 25 hole deviations are specified by using :
(A) small letters (B) small letters with numbers
(C) small letters with tolerance (D) capital letters
74. Which one of the following abrasives is used for honing non-ferrous metals?
(A) Aluminium oxide (B) Silicon carbide
(C) Diamond (D) Boron carbide
75. The general ratio of soluble oil and water used as coolant is :
(A) 10 : 1 (B) 1 : 10
(C) 1 : 20 (D) 20 : 1
76. While machining cast iron, the coolant used should be :
(A) dry air (B) kerosene
(C) soluble oil (D) soft water

77. Which one of the following reason that water is not preferred as coolant on machine tools?
- (A) It decreases cutting action of the tool
 - (B) Danger of corrosion
 - (C) It has insufficient cooling effect
 - (D) Due to high cooling effect the cutting edges of tool break off
78. Which one of the following is used to guide the tool and hold the job in mass production?
- (A) gauge
 - (B) housing
 - (C) jig
 - (D) fixture
79. Main alloying element in H.S.S. is :
- (A) Tungsten
 - (B) Chromium
 - (C) Vanadium
 - (D) Nickel
80. 'Cyaniding' and 'Nitriding' are two methods of :
- (A) Hardening
 - (B) Case hardening
 - (C) Tempering
 - (D) Normalising
81. The largest shipyard in India is :
- (A) Vishakapatana
 - (B) Mumbai
 - (C) Cochin
 - (D) Kolkata
82. The head quarters of Kerala Forest Research Institute is situated at :
- (A) Silent valley
 - (B) Peechi
 - (C) Thiruvananthapuram
 - (D) Wynad
83. First Health Minister of Kerala State was :
- (A) Dr. A.R.Menon
 - (B) Dr. K.B.Menon
 - (C) V.P.Menon
 - (D) Joseph Mundasseri
84. The Metro Railway system was first introduced in India at :
- (A) Hyderabad
 - (B) Mumbai
 - (C) New Delhi
 - (D) Kolkata

85. The year _____ has been declared as the international year of cooperatives by the U.N.O.
(A) 2009 (B) 2010
(C) 2011 (D) 2012
86. In which state is the Rajiv Gandhi National Institute of Youth Development located?
(A) Kerala (B) Karnataka
(C) Tamil Nadu (D) Madhya Pradesh
87. Which one of the following Articles of the Directive Principles of State Policy deals with the promotion of International Peace and Security?
(A) 41 (B) 48
(C) 50 (D) 51
88. From which one of the following did Kosovo declare its independence?
(A) Hungary (B) Macedonia
(C) Serbia (D) Portugal
89. The branch of science which deals with the study of cells :
(A) Cytology (B) Ecology
(C) Anatomy (D) Dermatology
90. The part of the body that is affected by tuberculosis :
(A) Throat (B) Lungs
(C) Heart (D) Skin
91. Ezhava memorial was prepared by the leader :
(A) Dr. Palpu (B) A.K. Gopalan
(C) K. Kelappan (D) M.N. Roy
92. The National Game of India is :
(A) Cricket (B) Football
(C) Hockey (D) Baseball
93. Ozone is a form of :
(A) Hydrogen (B) Oxygen
(C) Nitrogen (D) Carbon

94. How many members are nominated to the House of People by the President of India?
(A) twelve (B) fifteen
(C) one (D) two
95. 'India wins freedom' was written by :
(A) Larri Collins (B) Nehru
(C) Abul Kalam Azad (D) Dr.A.P.J.Abdul Kalam
96. The First five year plan in India was drafted under the guidance of :
(A) K.N. Raj (B) P.C. Mahalanobis
(C) Dr. M.S. Swaminathan (D) Fasal Ali
97. Former Prime Minister Rajiv Gandhi was assassinated in the year :
(A) 1984 (B) 1987
(C) 1989 (D) 1991
98. First Woman Vice Admiral of Indian Navy is :
(A) Anitha Roy (B) Punita Arora
(C) Sunitha Rao (D) Manita Singh
99. Environment Ministry of India Launched a campaign 'Haathi Mera Saathi'. The main objective of this campaign was :
(A) Conservation and welfare prospects of Elephants
(B) Protection of environment
(C) Protection of forest
(D) Prevention of soil erosion
100. Indian Space Research Organisation is situated at :
(A) New Delhi (B) Bangalore
(C) Thiruvananthapuram (D) Chennai