

10. MIS stands for ()
(1) military inspection scheme (2) management information system
(3) management intelligence system (4) management information service
11. Propeller shaft is a link between the following ()
(1) gear box and differential (2) engine and gear box
(3) differential and road wheels (4) engine to road wheels
12. Universal joint connects ()
(1) engine to gear box (2) engine to propeller shaft
(3) gear box to propeller shaft (4) engine to differential gear box
13. Differential gear mechanism is introduced in automobiles to enable ()
(1) Climbing up steep gradient (2) Climbing down the steep gradient
(3) Negotiating left or right turn (4) Extra grip on the road
14. Camber angle is provided on ()
(1) front wheels (2) rear wheels
(3) pinion gears (4) crown gear
15. Steering gear box employs the following ()
(1) one spur and one bevel gear (2) two spur gears
(3) rack and pinion (4) worm and worm wheel
16. Which of the following properties are undesirable to brake fluid ? ()
(1) anti-corrosive (2) high viscosity
(3) low freezing point (4) high boiling point
17. Crown-nut pinion gear mechanism is related to ()
(1) steering gear box (2) high speed gear box
(3) differential gear (4) drive shaft and wheel
18. Ackerman mechanism is related to ()
(1) differential gear mechanism (2) steering mechanism
(3) braking mechanism (4) cooling mechanism
19. To increase the maneuverability of vehicle the following is desirable ()
(1) smaller wheels (2) larger wheels
(3) larger turning radius (4) smaller turning radius
20. King pin is related to the following ()
(1) front axial (2) rear axial
(3) universal joint (4) differential gear

21. The clearance between two surfaces in contact is checked by ()
(1) Surface gauge (2) feeler gauge
(3) slip gauge (4) dial gauge
22. External gaper on the component is measured accurately by ()
(1) dividing head (2) sine-bar
(3) try square (4) micrometer
23. The commonly used work-holding device on Capstan lathe is ()
(1) Three jaw chuck (2) Four jaw chuck
(3) Collect chuck (4) Hydraulic chuck
24. Reaming of the holes is done for ()
(1) finishing the hole (2) enlarging the hole
(3) obtaining taper (4) closing the hole
25. The process of smoothing and squaring the surface around the hole to have good bearing surface is known as ()
(1) trepanning (2) under cutting
(3) counter boring (4) spot facing
26. Size of shaper is specified by ()
(1) length of the stroke
(2) size of table
(3) ratio of forward and return stroke angles
(4) H.P. of motor
27. The profile of the template is duplicated on the jobs in ()
(1) column and knee milling m/c (2) Rotary milling m/c
(3) Pantagraph milling m/c (4) Planetary milling m/c
28. A milling cutter is rotating at 150 rpm the table travel is 50 mm/min. Feed per tooth will be ()
(1) 0.33 mm (2) 0.033 mm
(3) 0.44 mm (4) 0.044 mm
29. In NC part programming, preparatory function is represented as ()
(1) M (2) G
(3) S (4) F
30. Automated Guided Vehicles (AGV) are used in ()
(1) CNC (2) DNC
(3) NC (4) FMS

31. Projection welding is ()
(1) Arc welding (2) Gas welding
(3) Submerged welding (4) Resistance welding
32. The voltage supplied between electrodes in resistance welding is ()
(1) 1 V (2) 10 V
(3) 100 V (4) 230 V
33. In gas welding maximum temperature occurs at ()
(1) The inner cone (2) The tip of flame
(3) The outer cone (4) Next to inner cone
34. The instrument, Dilatometer is used to find the following parameter ()
(1) permeability (2) moisture content
(3) hot strength (4) compactness
35. Strongest components are produced by the following process ()
(1) Rolling (2) Forging
(3) Extrusion (4) Casting
36. Swaging is an operation of ()
(1) extrusion (2) drawing
(3) rolling (4) forging
37. Permeability of moulding sand is increased by ()
(1) Round shaped grains (2) Finer grains
(3) Coarse grains (4) Pure silica grains
38. Rapping allowance is created on the patterns to take care of ()
(1) distortion (2) easy withdrawals
(3) shrinkage (4) machining
39. Seamless tubes in mass production are manufactured by ()
(1) extrusion (2) spinning
(3) rolling (4) drawing
40. In drawing operation the metal flows due to ()
(1) work hardening (2) shearing
(3) plasticity (4) yielding
41. The process of heat-treatment in which heating and cooling produces a rounded or globular form of carbide is called ()
(1) Normalising (2) Nitriding
(3) Sphero'idising (4) Ultra hardening

53. The cross-section of V-belt drive will be ()
(1) trapezoidal (2) triangular
(3) inverted triangle (4) rectangular
54. If the tensions in a belt drive are 1200 N and 800 N, while the velocity of the belt drive is 30 m/s, the power transmitted as ()
(1) 12 kW (2) 1.2 kW
(3) 36 kW (4) 24 kW
55. If two springs are arranged in parallel, their overall stiffness will be ()
(1) same (2) half
(3) double (4) four times
56. Universal coupling is generally used to transmit ()
(1) when the misalignment is present
(2) when the axes are not in alignment
(3) as rigid coupling
(4) when the axes intersect at small angle
57. An eye-bolt is generally provided on ()
(1) Automobiles (2) Cranes
(3) Electric motors (4) Machine tools
58. Axial thrust in both directions are taken care by ()
(1) spur gears (2) helical gears
(3) herringbone gears (4) worm gears
59. Which of the following is not a flexible coupling? ()
(1) Bushed pin (2) Universal
(3) Muff (4) Oldham
60. Which of the following gear transmission is used for non-parallel and non-intersecting shafts? ()
(1) spur gears (2) worm gears
(3) helical gears (4) hypoid gears
61. In isothermal process the heat transfer will be ()
(1) equal to work done (2) less than work done
(3) more than work done (4) cannot be estimated
62. If a gas vapour is allowed to expand through a very minute hole, then such a process is called ()
(1) free expansion (2) throttling
(3) adiabatic process (4) hyperbolic expansion
63. For reversible adiabatic operation, the change in entropy is ()
(1) maximum (2) minimum
(3) negative (4) zero

64. In a Carnot cycle, heat is transferred at ()
 (1) constant temperature (2) constant pressure
 (3) constant volume (4) constant enthalpy
65. A process which undergoes energy loss due to friction is called ()
 (1) Isentropic operation (2) Reversible operation
 (3) Adiabatic operation (4) Irreversible operation
66. Which of the following is not an extensive property ? ()
 (1) enthalpy (2) entropy
 (3) density (4) internal energy
67. The process of converting a liquid into fine droplets by spraying is called ()
 (1) Vapourisation (2) Ionisation
 (3) Atomisation (4) Injection
68. Supercharging is very much needed in ()
 (1) diesel engines (2) aircraft engines
 (3) petrol engines (4) gas turbines
69. Ignition quality of petrol is expressed by ()
 (1) Cetane number (2) Calorific value
 (3) Octane number (4) Self ignition temperature
70. Method of governing used in petrol engine is ()
 (1) quality governing (2) partial governing
 (3) hit and mis governing (4) quantity governing
71. A turbine is a device which converts ()
 (1) Hydraulic energy into mechanical energy
 (2) Mechanical energy into hydraulic energy
 (3) Kinetic energy into mechanical energy
 (4) Electrical energy into mechanical energy
72. Fancis turbine is ()
 (1) an impulse turbine (2) a radial flow impulse turbine
 (3) an axial flow turbine (4) a reaction radial flow turbine
73. Speed ratio is given by ()
 (1) $\frac{u}{\sqrt{2gH}}$ (2) $\frac{v_f}{\sqrt{2gH}}$
 (3) $\frac{\sqrt{2gH}}{v_f}$ (4) $\frac{v_w}{\sqrt{2gH}}$

74. Draft tube is used for discharging water from the exit of ()
(1) An impulse turbine (2) A Francis and Kaplan turbine
(3) A Propeller turbine (4) A Pelton wheel
75. Main characteristic curves of a turbine means ()
(1) Curves at constant speed (2) Curves at constant efficiency
(3) Curves at constant head (4) Curves at constant speed and head
76. Governing of a turbine means ()
(1) the head is kept constant under all conditions of working
(2) the speed is kept constant under all conditions of working
(3) the discharge is kept constant under all conditions of working
(4) the speed and discharge is kept constant under all conditions of working
77. Mechanical efficiency (η_{mech}) of a centrifugal pump is given by ()
(1) (Power at the impeller)/S.H.P
(2) S.H.P/Power of the impeller
(3) Power possessed by water/power at the impeller
(4) Power possessed by water/S.H.P
78. Cavitation can take place in case of ()
(1) Pelton wheel (2) Francis
(3) Kaplan (4) Francis and Kaplan
79. For low head and high discharge, the suitable turbine is ()
(1) Pelton (2) Francis
(3) Kaplan (4) Francis and Kaplan
80. Rotameter is used for measuring ()
(1) density of fluids (2) velocity of fluids in pipes
(3) discharge of fluids (4) viscosity of fluids
81. The unit of radioactivity is ()
(1) electron-volt (2) electron-ampere
(3) Curie (4) MeV
82. The following present serious difficulty in designing a reactor shield ()
(1) alpha particles (2) beta particles
(3) thermal neutrons (4) fast neutrons and gamma rays
83. One kg steam sample contains 0.8 kg dry steam its dryness fraction is ()
(1) 0.2 (2) 0.8
(3) 1.0 (4) 0.6
84. The state of vapour under saturation condition is described by ()
(1) Pressure alone (2) Temperature alone
(3) Pressure and temperature (4) Pressure and dryness fraction

85. Which of the following is a water tube boiler ? ()
- (1) Locomotive boiler (2) Cochran boiler
(3) Babcock and Wilcox boiler (4) Cornish boiler
86. In the impulse turbine steam expands ()
- (1) in the nozzle (2) in the blades
(3) Partly in nozzle and partly in blades (4) none
87. For critical pressure ratio, the discharge through a nozzle is ()
- (1) maximum (2) minimum
(3) zero (4) unpredictable
88. The commonly used material of pipes in condensers is ()
- (1) mild steel (2) admiralty brass
(3) stainless steel (4) cast iron
89. Which of the following is heaviest ? ()
- (1) neutron (2) proton
(3) atom (4) electron
90. Electron-volt is the unit of ()
- (1) atomic power (2) energy
(3) voltage (4) radioactivity
91. One ton refrigeration is equal to the refrigeration effect corresponding to 1000 kg of ice in ()
- (1) 1 hour (2) 24 hours
(3) 12 hours (4) 1 minute
92. Moisture in a refrigerant is removed by ()
- (1) evaporator (2) safety relief valve
(3) dehumidifier (4) drier
93. Rating of a domestic refrigerator is of the order of ()
- (1) 0.1 ton (2) 5 tons
(3) 10 tons (4) 40 tons
94. The value of COP in vapour compression cycle is ()
- (1) always $<$ unity (2) always $>$ unity
(3) always $=$ unity (4) always $<$ zero
95. Which of the following is not a desirable property of a good insulating material ? ()
- (1) Light weight (2) High heat conductivity
(3) Odourless (4) Low initial cost

96. Wet bulb temperature is

- (1) indication of amount of moisture in air
- (2) measured by wetting the bulb of thermometer
- (3) less than dry bulb temperature
- (4) depend on the dryness of air

97. The boiling point of ammonia of

- (1) -100°C (2) -50°C
(3) -33.3°C (4) 0°C

98. Air refrigeration operates on

- (1) Carnot cycle (2) Reversed Carnot cycle
(3) Bell Coleman cycle (4) Brayton cycle

99. The higher temperature in vapor compression cycle occurs at

- (1) receiver (2) expansion valve
(3) compressor discharge (4) condenser discharge

100. Where does the lower temperature occur in vapor compression cycle?

- (1) evaporator (2) condenser
(3) compressor (4) receiver

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KEY

1. 1	2. 3	3. 4	4. 3	5. 4	6. 1	7. 3	8. 2	9. 1	10. 2
11. 1	12. 3	13. 3	14. 1	15. 3	16. 3	17. 3	18. 2	19. 4	20. 1
21. 2	22. 2	23. 3	24. 1	25. 1	26. 1	27. 3	28. 1	29. 2	30. 4
31. 4	32. 1	33. 1	34. 2	35. 2	36. 4	37. 3	38. 2	39. 1	40. 3
41. 3	42. 4	43. 2	44. 1	45. 2	46. 3	47. 2	48. 4	49. 2	50. 4
51. 1	52. 3	53. 1	54. 1	55. 3	56. 4	57. 3	58. 3	59. 3	60. 2
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71. 1	72. 4	73. 1	74. 4	75. 3	76. 2	77. 1	78. 4	79. 3	80. 3
81. 4	82. 4	83. 2	84. 3	85. 3	86. 1	87. 1	88. 2	89. 1	90. 4
91. 2	92. 3	93. 1	94. 2	95. 2	96. 2	97. 3	98. 3	99. 3	100. 1

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