

Hall Ticket Number

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(To be filled by the Candidate)

S. No.

123451

Booklet Code

A

SET CODE

SM-2

Signature of the Invigilator

INSTRUCTIONS TO THE CANDIDATE

(Read the Instructions carefully before Answering)

1. Separate Optical Mark Reader (OMR) Answer Sheet is supplied to you along with Question Paper Booklet. Please read and follow the instructions on the OMR Answer Sheet for marking the responses and the required data.
2. The candidate should ensure that the booklet code printed on OMR sheet and question paper booklet code supplied are same.
3. **Immediately on opening the Question Paper Booklet by tearing off the paper seal please check for (i) The same booklet code (A/B/C/D) on each page, (ii) Serial Number of the questions (1-200), (iii) The number of pages and (iv) Correct Printing.** In case of any defect, please report to the invigilator and ask for replacement of booklet with same code within five minutes from the commencement of the test.
4. Electronic gadgets like Cell Phone, Pager, Calculator, Watches and Mathematical/Log Tables are not permitted into the examination hall.
5. Darken the appropriate circles of 1, 2, 3 or 4 in the OMR sheet corresponding to correct or the most appropriate answer to the concerned question number in the sheet. Darkening of more than one circle against any question automatically gets invalidated.
6. Rough work should be done only in the space provided in the Question Paper Booklet.
7. Return the OMR Answer Sheet and Question paper booklet to the invigilator before leaving the examination hall. Failure to return is liable for criminal action.
8. The duplicate OMR sheet shall be taken away by the candidate and should be preserved till the declaration of results.

This Booklet consists of 21 Pages for 200 Questions + 02 Pages of Rough Work + 01 Title Page i.e. Total 24 Pages.

P17

SM-2

Booklet Code **A**

SPACE FOR ROUGH WORK

Time : 3 Hours

Marks : 200

Instructions :

- (i) Each question carries *one* mark.
- (ii) Choose the correct or most appropriate answer from the given options to the following questions and darken, with blue/black ball point pen, the corresponding digit **1, 2, 3** or **4** in the circle pertaining to the question number concerned in the OMR Answer Sheet, separately supplied to you.
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1. Which of the following is an example of external combustion engine?
(1) petrol engine (2) diesel engine
(3) gas turbine (4) CNG engine
-
2. In compression ignition engine the fuel is ignited by
(1) spark plug
(2) due to high temperature in the cylinder
(3) compression of fuel
(4) high temperature of air-fuel mixture
-
3. Which of the following is true for a two stroke engine in comparison with four stroke engine
(1) Thermal efficiency is higher
(2) Initial cost is higher
(3) Design is simpler for the same power output
(4) Heavier
-
4. A compensation jet is incorporated in a zenith carburettor in order to prevent
(1) flooding at high speed (2) richness at high speed
(3) weakness at high speed (4) starvation at high speed
-
5. Power output of a diesel engine is controlled by
(1) varying the pump timing (2) varying the compression ratio
(3) regulating the quality of air induced (4) regulating the quantity of fuel injected
-
6. Water circulation in a thermos-syphon cooling system is caused by
(1) conduction current (2) a belt driven water impeller
(3) a gear driven water pump (4) the change in density of water
-
7. What term is used to describe the type of lubrication given to an engine piston
(1) boundary (2) pumped (3) pressure (4) full-fill

8. A spark occurs at the spark plug when the contact-breaker of a coil ignition system
(1) just close (2) just open
(3) is fully opened (4) is fully closed
-
9. Charge is admitted into cylinder
(1) before t.d.c (2) at t.d.c (3) after t.d.c (4) at b.d.c
-
10. The purpose of a capacitor in a coil ignition system is to
(1) transform the voltage (2) acts as an electrical switch
(3) direct the current to spark plug (4) prevent arcing at contact-breaker
-
11. Narrow passage are drilled through crank-shaft, ca rod etc., in order to
(1) reduce the weight of these parts (2) provide flow for lubricating oil
(3) provide drain for fuel oil (4) provide more heat transfer
-
12. Diesel engines generally adopt
(1) quantity governing (2) quality governing
(3) hit and miss governing (4) hybrid governing
-
13. Which part of the carburettor shuts off the air supply to aid cold starting
(1) throttle (2) strangler
(3) float (4) needle valve
-
14. What happens below the piston of a 2-stroke engine at the instant when the spark occurs
(1) fresh gas is being compressed
(2) transfer port has just opened
(3) fresh charge is flowing in through inlet port
(4) fresh charge is scavenging the burnt gases
-
15. A single cylinder 2 stroke engine is running at 3000 rpm. The number of power strokes per minute is:
(1) 750 (2) 3000 (3) 1500 (4) 600
-
16. Tungsten carbide fall under the category of
(1) metals (2) ceramics
(3) organic material (4) non-metals
-
17. Which one of the property is more related to ceramics
(1) dimensional stability (2) combustible
(3) high temperature strength (4) light weight

18. Which of the following metal is used in making electrical resistance wire for electric furnaces and heating elements?
- (1) Babbit metal (2) Monel metal
(3) Phosphor Bronze (4) Nichrome
-
19. The strength of material when subjected to high rate of loading
- (1) Ultimate strength (2) Impact strength
(3) Creep strength (4) Fatigue strength
-
20. The carbon content in steels designated as 25 C5 B0 is
- (1) 0.25 % (2) 0.5% (3) 0.15 (4) 0.125%
-
21. Wrought iron products are manufactured by
- (1) casting (2) machining
(3) spinning (4) forging
-
22. Machine tool structure are made of
- (1) mild steel (2) grey cast iron
(3) white cast iron (4) tool steel
-
23. Nodular cast iron is suitable for manufacturing
- (1) ball mill components (2) farm implements
(3) gear case (4) piston rings
-
24. Corrosion resistance in stainless steel is due to the presence of
- (1) carbon (2) manganese (3) tungsten (4) chromium
-
25. Which of the following material is suitable for service temperature down to -100°C
- (1) nickel steel (2) austenitic stainless steel
(3) chromium steel (4) tempered steel
-
26. Presence of hydrogen in steel causes
- (1) Reduced neutron absorption cross section
(2) Improved weldability
(3) Embrittlement
(4) Corrosion resistance
-
27. Invar is used for manufacturing measuring tapes primarily due to its
- (1) non-magnetic properties (2) high nickel content
(3) low coefficient of thermal expansion (4) hardenability

28. Which of the following is in the order of increasing hot hardness of cutting tool material?
(1) Diamond, Carbide, HSS (2) Carbide, Diamond, HSS
(3) HSS, Carbide, Diamond (4) HSS, Diamond, Carbide
-
29. Cupola is used for making
(1) Steel (2) Pig iron (3) Cast iron (4) Alloy Steel
-
30. Which of the following is true for Killed steel
(1) having minimum impurity level
(2) are produced by LD process
(3) have almost zero percentage of phosphorus and sulphur
(4) are free from oxygen
-
31. In case of Rockwell hardness test the measure of hardness is the
(1) depth of penetration (2) surface area of indentation
(3) projected area of indentation (4) depth of scratch
-
32. Engineering stress is the same as the
(1) true stress (2) conventional stress
(3) average stress (4) final stress
-
33. The point in the stress-strain curve at which the strain increases considerably without any increase in stress is called the
(1) limit of proportionality (2) elastic limit
(3) upper yield point (4) lower yield point
-
34. A bar of copper and steel form a composite system. They are heated to a temperature of 40°C. The stress in copper bar will be
(1) tensile (2) compressive (3) zero (4) shear
-
35. The radius of Mohr's circle gives the value of
(1) maximum normal stress (2) minimum normal stress
(3) maximum shear stress (4) minimum shear stress
-
36. The relationship between E , G and ν is given by
(1) $G = E(1 + \nu)$ (2) $G = \frac{E}{2(1 + \nu)}$
(3) $G = \frac{E}{2}(1 + \nu)$ (4) $G = \frac{2E}{(1 + \nu)}$

37. The maximum bending moment in a cantilever beam carrying a concentrated load at the free end occurs
(1) below the load (2) at mid-span
(3) at the fixed end (4) near the load
-
38. Whenever the bending moment is maximum the shear force is
(1) also maximum (2) minimum (3) zero (4) unity
-
39. At the point of contraflexure
(1) the stress is zero (2) the shear force is zero
(3) the bending moment is zero (4) the slope is zero
-
40. Proof resilience may be defined as
(1) work done in straining the material
(2) maximum strain energy that can be stored in a material
(3) maximum strain energy that can be stored in a material per unit volume
(4) maximum load which can be applied to a member
-
41. The lead screw of a lathe with nut is a
(1) rolling pair (2) screw pair
(3) turning pair (4) sliding pair
-
42. Which of the following is an inversion of double-slider crank chain
(1) Whitworth quick return mechanism (2) Reciprocating mechanism
(3) Scotch yoke (4) Rotary engine
-
43. Oldham's coupling is used to connect two shafts which are
(1) intersecting (2) parallel
(3) perpendicular (4) co-axial
-
44. The cam follower used in automobile engine is
(1) roller (2) flat-faced
(3) spherical-faced (4) knife-edged
-
45. A pantograph consists of
(1) 4 links (2) 6 links (3) 8 links (4) 10 links
-
46. The efficiency of a screw jack depends on
(1) the pitch of the thread (2) the load
(3) both pitch and load (4) neither pitch nor load

47. The crowning of pulley is done to
(1) Increase the tightness of the belt on the pulley
(2) Prevent belt running off the pulley
(3) Increase the torque transmitted
(4) Improve the shape and strength of the pulley
-
48. For maximum power transmission by the belt drive, the maximum tension must be
(1) $2T_c$ (2) $3T_c$ (3) $4T_c$ (4) $5T_c$
-
49. The contact ratio of gears is always
(1) more than one (2) one (3) less than one (4) zero
-
50. Which of the following brakes is commonly used in motor cars
(1) Band brake (2) Shoe brake
(3) Band and block brake (4) Internal expanding shoe brake
-
51. The effort of a governor is the force exerted by the governor on the
(1) balls (2) sleeve (3) upper links (4) lower links
-
52. At resonance, the amplitude of vibration is
(1) very large (2) small
(3) zero (4) depends on frequency
-
53. At certain speed, revolving shaft tend to vibrate violently in transverse direction. The speed is known as
(1) whirling speed (2) critical speed
(3) whipping speed (4) turbulent speed
-
54. A Hartnell governor is categorised as
(1) dead weight type (2) pendulum type
(3) inertia (4) spring-loaded
-
55. In a clock mechanism, the hour and minute hands are connected by
(1) simple gear train (2) epicyclic gear train
(3) compound gear train (4) reverted gear train
-
56. The most suitable follower motion programme for a high-speed engine is
(1) Uniform acceleration and deceleration
(2) Uniform velocity
(3) Simple harmonic motion
(4) Cycloidal

57. Which of the following tool is used to test squareness of two adjacent surfaces
(1) Straight edge (2) Bevel square (3) Try square (4) Marking gauge
-
58. Short straight cuts are made by
(1) Compass saw (2) Crosscut saw (3) Tennon saw (4) Dovetail saw
-
59. Core sand which is used to make cores contains more of
(1) binder (2) silica (3) clay (4) molasses
-
60. Loam moulds are used for castings which are
(1) large (2) extremely large
(3) intricate shape (4) small size
-
61. Which of the following is not the angle/length measuring device
(1) Angle plate (2) Bevel protractor
(3) Slip gauge (4) Micrometre screw gauge
-
62. Which of the following instrument is used for checking relief angles on large cutting tools and milling cutter inserts
(1) engineer's square (2) bevel protractor
(3) clinometers (4) auto collimator
-
63. The center of a round bar can be correctly located by using a
(1) steel rule (2) combination set
(3) compass (4) divider
-
64. An error of 5% occurred during the measurement of the diameter of a cylindrical part. The likely error in the calculated weight of the part is
(1) 1% (2) 5% (3) 7.5% (4) 10%
-
65. What will be the cutting speed when a 70 mm diameter work piece is turned at 1000 rpm
(1) 1.32 m/min (2) 220 m/min (3) 13.2 m/min (4) 2.2 m/min
-
66. On lathe machine drilling can be done by using
(1) compound rest (2) feed wheel (3) tail stock (4) lead screw
-
67. In taper turning operation $D = 100$ mm, $d = 80$ mm and $L = 100$ mm, then coinity is
(1) 0.1 (2) 0.2 (3) 0.3 (4) 0.5
-
68. Most commonly used drill point angle is
(1) 60° (2) 90° (3) 118° (4) 120°

69. Fly cutter is used in the following type of machine
(1) lathe (2) milling
(3) jig boring (4) broaching
-
70. For cutting double start screw thread of pitch 1.0 mm on a lathe, the thread cutting tool should have a feed rate of
(1) 0.5 mm/rev (2) 1 mm/rev
(3) 2.0 mm/rev (4) 4.0 mm/rev
-
71. In a quick return mechanism, the job length is 600 mm, number of double strokes is 20 and quick return ratio is 2:3, then cutting speed is
(1) 10 m/min (2) 20 m/min (3) 45 m/min (4) 100 m/min
-
72. Goose neck tools are preferred in planers and slotters because
(1) Digging in and removing of the work is minimum
(2) Large clearance angles are possible
(3) Friction between flank and machined surface is less
(4) Blank rake is appropriate
-
73. Bevel gears are manufactured by
(1) hobbing (2) milling
(3) generating process (4) broaching
-
74. The process of precision grinding of part with loose dust type abrasive is known as
(1) lapping (2) super finishing (3) buffing (4) boring
-
75. Honing is a process used for finishing
(1) flat surfaces only (2) round bars
(3) holes (4) tapered components
-
76. A horizontal boring machine is specified by
(1) the diameter of job it can hold (2) the diameter of table in mm
(3) the diameter of spindle in mm (4) all of the above
-
77. For indexing 70 parts by using an indexing plate hole circle of 28 holes, the indexing crank should be turned through
(1) 12 holes (2) 16 holes (3) 20 holes (4) 22 holes
-
78. The advantage of die casting is
(1) thick section can be casted (2) wide tolerances are possible
(3) any material can be casted (4) high production rate is possible

79. The function of facing sand in the mould is to
- (1) increases permeability
 - (2) increases dry strength
 - (3) provide protection to the surface of mould
 - (4) facilitates easy removal of casting
-
80. In which of the following process two tungsten electrodes are used
- (1) carbon arc welding
 - (2) submerged arc welding
 - (3) ultrasonic welding
 - (4) atomic hydrogen welding
-
81. In thermite welding process, thermite consists of
- (1) three parts of iron oxide and one part of aluminium powder by weight
 - (2) three parts of iron oxide and one part of aluminium powder by volume
 - (3) three parts of aluminium powder and one part iron oxide of by weight
 - (4) three parts of aluminium powder and one part iron oxide of by volume
-
82. House hold LPG cylinders are welded by
- (1) Submerged arc welding
 - (2) MIG welding
 - (3) TIG welding
 - (4) Carbon arc welding
-
83. The stress induced during cold working process would be
- (1) less than yield strength
 - (2) more than ultimate strength
 - (3) less than ultimate strength but more than yield strength
 - (4) more than yield strength but less than fracture strength
-
84. Coining is the operation related to
- (1) cold forging
 - (2) embossing
 - (3) pressing
 - (4) hot forging
-
85. Spinning operation is performed on which of the following machines
- (1) milling machine
 - (2) lathe machine
 - (3) roller machine
 - (4) shaping machine
-
86. The most important property of material required in metal forging process is
- (1) elasticity
 - (2) malleability
 - (3) plasticity
 - (4) ductility
-
87. The increase in hardness due to cold working is called
- (1) age hardening
 - (2) cold hardening
 - (3) strain hardening
 - (4) hot hardening

88. Yellow colour on the pattern is marked for indicating
(1) core prints (2) unfinished surface
(3) machined surface (4) loose piece pattern
-
89. Wrinkling defects are observed in which of the following operations
(1) punching (2) casting
(3) blanking (4) drawing
-
90. To obtain a hole above and below the parting line the following core is used
(1) cover (2) horizontal
(3) balanced (4) wing
-
91. The force required to act upon the jet of water to change the velocity either in direction or in magnitude is called
(1) hydrostatic force (2) absolute force
(3) normal force (4) dynamic force
-
92. A jet of water flowing at the rate of $10 \text{ m}^3/\text{sec}$ and with velocity of 20 m/sec strikes a fixed plate normally. The dynamic force exerted on the plate is
(1) 50 kN (2) 100 kN (3) 150 kN (4) 200 kN
-
93. The force exerted by the jet on a semi-circular vane is
(1) 2 times that on a flat plate (2) 3 times that on a flat plate
(3) 4 times that on a flat plate (4) same as that on a flat plate
-
94. The ratio of actual work available at the turbine to the energy supplied to the wheel is known as
(1) hydraulic efficiency (2) manometric efficiency
(3) overall efficiency (4) mechanical efficiency
-
95. The condition of maximum efficiency of the pelton wheel is that, the blade speed should be
(1) equal to jet speed (2) $1/4$ of jet speed
(3) $1/3$ of jet speed (4) $1/2$ of jet speed
-
96. The turbine best suited for operating at part loads is
(1) francis turbine (2) kaplan turbine (3) pelton turbine (4) propeller turbine
-
97. The specific speed of the turbine is given by
(1) $\frac{\sqrt{P}}{H^{5/4}}$ (2) $\frac{N\sqrt{P}}{H^{5/4}}$ (3) $\frac{H^{5/4}}{\sqrt{P}}$ (4) $\frac{H^{5/4}}{N\sqrt{P}}$

98. In reaction turbine, the draft tube is used to
- (1) Transport water downstream without eddies
 - (2) Convert kinetic energy to flow energy by a gradual expansion of the flow cross-section
 - (3) Increase the effective head
 - (4) Run the turbine full
-
99. Negative slip occurring in reciprocating pump is due to
- (1) excessive length of the suction pipe
 - (2) very short length of the delivery pipe
 - (3) high speed of the driving mechanism
 - (4) low speed of the driving mechanism
-
100. Manometric head and discharge of a centrifugal pump are 20 m and 50 lt/sec respectively the theoretical power required to drive the pump is
- (1) 9810 kW
 - (2) 9.81kW
 - (3) 1000kW
 - (4) 10kW
-
101. A single acting reciprocating pump has its piston area 3000 mm^2 and stroke 300 mm. Speed of the crank is 60 rpm the theoretical discharge would be
- (1) 9 lt/sec
 - (2) 9 lt/min
 - (3) 90 lt/min
 - (4) 90 lt/sec
-
102. In butterfly valve the circular disc has a diameter equal to
- (1) half of the diameter of pipe
 - (2) the diameter of pipe
 - (3) one and half times the diameter of pipe
 - (4) twice the diameter of the pipe
-
103. In a diaphragm type accumulator
- (1) oil is pumped in the space below the diaphragm
 - (2) oil is pumped into the space above diaphragm
 - (3) air is pumped in to the space below diaphragm
 - (4) gas is pumped in to the space below diaphragm
-
104. The function of fourway valve is to
- (1) restrict the flow in one direction
 - (2) regulate the pressure in the system
 - (3) control the speed of an air cylinder
 - (4) direct air to various places in the system
-
105. Perfect synchronisation of the pistons of two pneumatic cylinders is possible in
- (1) pneumatic circuit
 - (2) hydro pneumatic circuit with one duplex unit
 - (3) hydro pneumatic circuit with two duplex units
 - (4) one duplex unit and one servo valve

106. Protection against over load in a pneumatic system is obtained by using
(1) a sequence valve and pilot valve (2) a sequence valve and a relief valve
(3) a sequence valve and ball check valve (4) a sequence valve and shuttle valve
-
107. Non return valves are necessarily required for
(1) centrifugal pump (2) reciprocating pump
(3) turbines (4) pelton wheel
-
108. In mixed flow reaction turbine the flow of water is
(1) radial (2) axial
(3) partly radial and partly axial (4) partly tangential and partly axial
-
109. The component of a turbine that transforms the hydraulic energy into mechanical energy is
(1) spiral casing (2) guide vanes
(3) runner (4) draft tube
-
110. In a reaction turbine vacuum gauge is fitted
(1) at inlet (2) in the casing
(3) at outlet (4) in front of control valve
-
111. The roughness grade symbol for the roughness value of 6.3 micrometers is
(1) N 9 (2) N 10
(3) N 11 (4) N 12
-
112. In metric thread designated by M 10×1.25
(1) Nominal diameter 10 mm and pitch 1.25 mm
(2) Cross sectional area 10 mm² and depth 1.25 mm
(3) Nominal diameter 1.25 mm and number of threads per mm are 10
(4) Cross sectional area 1.25 mm² number of threads per mm are 10
-
113. In the drawing of bolted joints, the radius of chamfer arc for the bolt nominal diameter of D is
(1) D (2) 1.2 D (3) 1.5 D (4) (1.5 D + 3)
-
114. In Production drawing the symbol used for butt weld is
(1) | (2) —
(3) □ (4) Δ
-
115. According to Indian standards, the total number of tolerance grades are
(1) 10 (2) 14 (3) 18 (4) 22

116. If the arithmetical difference between the hole and shaft size before assembly is negative then the type of fit is
- (1) clearance fit (2) transition fit
(3) interference fit (4) running fit
-
117. Surface roughness obtained by surface grinding is in the range of
- (1) 0.4 to 0.6 mm (2) 0.063 to 5 mm
(3) 0.012 to 0.16 mm (4) 0.016 to 0.32 mm
-
118. The type of fit suitable for gears and bearing bushes is
- (1) Interference fit (2) Transition fit
(3) Clearance fit (4) Running fit
-
119. Tolerance grade IT 11 can be obtained on
- (1) grinding machine (2) boring machine
(3) lathe machine (4) drilling machine
-
120. In the representation of dimensional tolerance capital letter represents
- (1) upper deviation (2) hole
(3) lower deviation (4) shaft
-
121. Outline of adjacent parts are represented by
- (1) continuous thin free hand line (2) continuous thin with zig-zag
(3) dashed thick (4) chain thin double-dashed
-
122. Pilot piece inspection is used in
- (1) process layout (2) product layout
(3) fixed position layout (4) flexible layout
-
123. 'P' chart is used for
- (1) process control (2) obtaining fraction of defects
(3) number of defects per unit (4) percentage error
-
124. The following chart is not SQC chart
- (1) \bar{X} - chart (2) P - chart (3) C - chart (4) D - chart
-
125. Salvaging means
- (1) writing off the assest
(2) adjusting losses against assest
(3) mortgaging property
(4) disposing property which is no longer useful

126. In Therbligs the number of elements or motions are used
(1) 14 (2) 15 (3) 16 (4) 17
-
127. Graphical representation of operations, inspection, delay and storages is called
(1) string diagram (2) flow process chart
(3) operation chart (4) flow diagram
-
128. Merit rating is the method of determining the
(1) Relative values of job (2) Worth of a machine
(3) Value of overall production (4) Worker's performance on a job
-
129. Production cost refers to prime cost plus
(1) factory overheads
(2) factory, administrative and overheads
(3) factory, administrative and sales overheads
(4) factory, administrative and sales overheads and profits
-
130. In Hasley 50-50 plan, the following are rewarded more
(1) good worker (2) poor worker
(3) average worker (4) all workers
-
131. In break even chart , X-axis represents
(1) profits (2) total expenses
(3) total sale (4) emergency expenses
-
132. Allowance of time given to worker, who is working on more than two machines at a time is called
(1) contingency allowance (2) process allowance
(3) interference allowance (4) fatigue allowance
-
133. Which of the following plans guarantees minimum wages
(1) rowan plan (2) bonus plan
(3) bedaux plan (4) emerson's efficiency plan
-
134. Lubricating oil and coolents are categorised into
(1) direct material (2) indirect material
(3) prime cost (4) factory overheads
-
135. A machine was purchased for Rs. 50,000. The residual value after ten years of its usage is Rs. 15,000/- the annual rate of depreciation is
(1) Rs. 150/- (2) Rs.3,500/- (3) Rs. 5,000/- (4) Rs. 6,500/-

136. The scale loss due to oxidation to be considered while estimating forging cost is
(1) 0 to 5% (2) 5 to 10%
(3) 10 to 20% (4) above 20%
-
137. In random sampling, if accepted number (3) is zero, then the lot is said to be
(1) excellent quality (2) poor quality
(3) medium quality (4) rejected quality
-
138. Salary of general manager falls under
(1) factory overheads (2) administrative overheads
(3) selling overheads (4) distribution overheads
-
139. Surplus material which comes out along the periphery of dies during the forging is called as
(1) sprue loss (2) scale loss
(3) tong loss (4) flash loss
-
140. Merit rating is the method of determining worth of
(1) a job (2) an individual employee
(3) a machine (4) a particular division in workshop
-
141. The difference between the line available to do the job and the time required to do the job is known as
(1) event (2) float (3) duration (4) constraint
-
142. In joint-stock company 'board of directors' are
(1) elected by share holders (2) nominated by Govt. of India
(3) technical decisions committee (4) represented major share holders
-
143. A legal adviser to the company would be
(1) managing director (2) company secretary
(3) commercial manager (4) high court lawyer
-
144. F.W. Taylor introduced a system of organization known as
(1) line organization (2) staff organization
(3) line and staff organization (4) functional organization
-
145. Loans taken in the form of cash or in the form of credit purchases are known as
(1) capitalization (2) assests
(3) liabilities (4) working capital

146. A written offer to do work or to provide a material at a given price with
(1) purchase requisition form (2) tender
(3) work order (4) purchase order
-
147. Every business transaction is recorded on the same day in a book is called
(1) ledger (2) journal
(3) profit and loss account (4) balance sheet
-
148. Scheduling determines
(1) path of product from raw material to finished product in the sequential order
(2) the best and cheapest operation of job
(3) movement of material in the shop floor
(4) the time and date of each operation
-
149. Middle man profit is eliminated in
(1) sole proprietorship (2) partnership organisation
(3) joint stock company business (4) co-operatives
-
150. Market fluctuation has no effect if the method of purchasing is
(1) strictly by requirement (2) for a specific period
(3) rate contract purchasing (4) speculative purchasing
-
151. The following is not a part of chasis
(1) wheels (2) front axle
(3) steering system (4) seats
-
152. Connecting rods are normally made in the form of
(1) I-section (2) forged I-section
(3) forged round section (4) cast iron square cross-section
-
153. Diesel engines are generally preferred for road transport because of low
(1) initial cost (2) manufacturing cost
(3) operation cost (4) maintenance cost
-
154. The starter motor is driven by
(1) chain drive (2) gear drive
(3) V-belt drive (4) flat-belt drive
-
155. The device for smoothing out the power impulses from the engine is called
(1) clutch (2) differential
(3) fly wheel (4) gear box

156. Commonly used antifreeze solution in automobile is
(1) carbon disulphide (2) glycol
(3) ammonium chloride (4) liquid ammonia
-
157. Which one of the following does not form a part of the fuel supply system for a diesel engine
(1) supply pump (2) filter (3) injector (4) air cleaner
-
158. Which air cleaner is considered to be most effective in diesel engines
(1) dry type (2) wet type (3) oil bath type (4) whirl type
-
159. In forced feed lubrication system the device used to guard against excessive oil pressure is known as
(1) release chamber (2) balancer
(3) relief valve (4) stop valve
-
160. In a diesel engine the function of a fuel injector is
(1) to mix fuel and air (2) to ignite air-fuel mixture
(3) to provide flame front for ignition (4) to spray atomized fuel in the cylinder
-
161. Connecting rod is attached to the piston by the
(1) rod cap (2) piston pin (3) cap bolt (4) lower cap
-
162. If a spark plug does not flash, the probable reason would be
(1) cracked porcelain
(2) weak ignition coil
(3) moisture or dirt accumulation on porcelain
(4) carbonized porcelain
-
163. For faultless braking system efficiency is
(1) brake fluid should be pure
(2) boiling point of brake fluid should be high
(3) viscosity of brake fluid should be high
(4) there should be minimum amount of trapped air
-
164. The operation of removing trapped air from hydraulic braking system is known as
(1) trapping (2) tapping (3) pressurization (4) bleeding
-
165. The trains are provided with following braking system
(1) hydraulic (2) pneumatic (3) vacuum (4) mechanical

166. The efficiency of mechanical brake is usually

- (1) 99% (2) 90-95% (3) 85-90% (4) 60-70%
-

167. In case of tractor the springs provided on rear wheels are

- (1) leaf type (2) helical
(3) combination of helical and leaf spring (4) no springs are provided
-

168. The device used to reduce the exhaust noise is known as

- (1) exhaust manifold (2) exhaust pipe
(3) muffler (4) tail pipe
-

169. Acid used in automobile battery is

- (1) hydrochloric acid (2) hydrofluoric acid
(3) nitric acid (4) sulphuric acid
-

170. Which oil is more viscous

- (1) SAE 40 (2) SAE 50 (3) SAE 60 (4) SAE 70
-

171. The distance between the centres of the front wheel is called the

- (1) track (2) wheel base (3) axle width (4) turning circle
-

172. Which one of the following is the trouble due to clutch

- (1) dragging (2) rattling (3) slipping (4) bending
-

173. The angle of camber normally is in the order of

- (1) less than $1/2^\circ$ (2) between $1/2^\circ$ to 2°
(3) 2° to 5° (4) 5° to 7°
-

174. The purpose of piston pin is to

- (1) prevent the valve from rotating
(2) line the connecting rod to the crank shaft
(3) ensure the piston ring to the piston
(4) connect the piston to the connecting rod
-

175. A universal joint which is constructed with two yokes joined by a cross-shaped trunnion is a type called

- (1) hooker (2) layrub (3) doughnut (4) constant velocity
-

176. A propeller shaft is a tubular instead of solid because

- (1) a solid shaft is weaker (2) its sag is smaller
(3) it is more rigid (4) it resists "wind up"

177. The crown wheel and pinion is called the
- (1) differential
 - (2) rear axle
 - (3) final drive
 - (4) rare drive
-
178. When a vehicle turns a corner, the action of the differential causes
- (1) the inner wheel to speed up
 - (2) the outer wheel to speed up
 - (3) an increase in the torque applied to inner wheel
 - (4) an increase in torque applied to the outer wheel
-
179. The damper fluid leakage typically occur from
- (1) Upper damper mounting
 - (2) Bottom of damper
 - (3) Coil spring mounting
 - (4) Clearance between inner and outer tubes of damper
-
180. In heavy trucks rear suspension is provided with
- (1) leaf springs
 - (2) closed coil helical spring
 - (3) dampers
 - (4) diaphragms
-
181. Diagnosis of large farm machinery is done by checking
- (1) tyre condition
 - (2) lubricating oil condition
 - (3) fuel consumption
 - (4) vibration level
-
182. Switch is used in a network to
- (1) prevent virus
 - (2) manage network traffic
 - (3) manage password
 - (4) connect to internet
-
183. Which of the following could be the reason which results in hardware settings revert to default values
- (1) mother board battery failed
 - (2) virus attack
 - (3) hard disk crashed
 - (4) SMPS failed
-
184. The term “mnemonics” means
- (1) machine language instructions
 - (2) compiler language instructions
 - (3) high level language instructions
 - (4) assembly language instructions
-
185. Which of the following protocol is used for sending e-mails
- (1) TCP/IP
 - (2) HTTP
 - (3) FTP
 - (4) SMTP

186. Blue screen error that occurs in computers is due to
(1) incompatible software (2) virus in the system
(3) hardware problem (4) network problem
-
187. Which one of the following companies provide cloud computing services
(1) Flipkart (2) Amazon
(3) ebay (4) snapdeal
-
188. Which of the following does not make use of semiconductors for its manufacture
(1) hard disk (2) pen drives
(3) chip (4) memory card
-
189. In Wi-Fi wireless technology, the Wi-Fi stands for
(1) Wireless-Fixture (2) Wireless-Fidelity
(3) Wireless-Finances (4) Wireless-Filezilla
-
190. The number of ignition coils in a distribution ignition system for a 6-cylinder engine is
(1) 1 (2) 2
(3) 3 (4) 6
-
191. The most accurate timer for electronic ignition system is the
(1) diode (2) transistor
(3) Hall effect switch (4) pulse generator
-
192. The ignition coil in an electronic ignition system is triggered on and off by means of a
(1) contact breaker (2) diode
(3) permanent magnet (4) timer
-
193. Automobile starting motors are
(1) only series wound (2) both series- shunt wound
(3) only shunt wound (4) synchronous motors
-
194. Power driven vehicles having at least four wheels and used for the carriage of goods are classified as
(1) category L (2) category M
(3) category N (4) category O
-
195. The two quantities used for specifying an electrical wire are
(1) the colour and length (2) the length and diameter
(3) the diameter and number of strands (4) the colour and diameter

196. In an electrical circuit of an automobile the electrical symbol $\frac{\perp}{\perp}$ represents

- (1) battery
 - (2) condenser
 - (3) coil
 - (4) resistor
-

197. The illumination generated by LED lights per watt

- (1) 80 lumens
 - (2) 100 lumens
 - (3) 130 lumens
 - (4) 170 lumens
-

198. The most accurate timer for electronic ignition system is the

- (1) diode
 - (2) transistor
 - (3) hall effect switch
 - (4) pulse generator
-

199. A pulse generator consists of a

- (1) permanent magnet, ignition coil and electronic control unit
 - (2) permanent magnet, reluctor and electronic control unit
 - (3) ignition coil, reluctor and electronic control unit
 - (4) permanent magnet, reluctor and timer coil
-

200. The three units contained in a regulator for automobile D.C generator are

- (1) voltage regulator, current regulator and zener diode
- (2) voltage regulator, current regulator and temperature compensator
- (3) voltage regulator, current regulator and cutout relay
- (4) zener diode, temperature compensator and cutout relay

SM-2

Booklet Code **A**

SPACE FOR ROUGH WORK
