

100/2018

Question Booklet
Alpha Code

A

Question Booklet
Serial Number

Total Number of Questions : 100

Time : 75 Minutes

Maximum Marks : 100

1. The question paper will be given in the form of a Question Booklet. There will be four versions of question booklets with question booklet alpha code viz. A, B, C & D.
2. The Question Booklet Alpha Code will be printed on the top left margin of the facing sheet of the question booklet.
3. The Question Booklet Alpha Code allotted to you will be noted in your seating position in the Examination Hall.
4. If you get a question booklet where the alpha code does not match to the allotted alpha code in the seating position, please draw the attention of the Invigilator IMMEDIATELY.
5. The Question Booklet Serial Number is printed on the top right margin of the facing sheet. If your question booklet is un-numbered, please get it replaced by new question booklet with same alpha code.
6. The question booklet will be sealed at the middle of the right margin. Candidate should not open the question booklet, until the indication is given to start answering.
7. Immediately after the commencement of the examination, the candidate should check that the question booklet supplied to him contains all the 100 questions in serial order. The question booklet does not have unprinted or torn or missing pages and if so he/she should bring it to the notice of the Invigilator and get it replaced by a complete booklet with same alpha code. This is most important.
8. A blank sheet of paper is attached to the question booklet. This may be used for rough work.
9. **Please read carefully all the instructions on the reverse of the Answer Sheet before marking your answers.**
10. Each question is provided with four choices (A), (B), (C) and (D) having one correct answer. Choose the correct answer and darken the bubble corresponding to the question number using Blue or Black Ball Point Pen in the OMR Answer Sheet.
11. **Each correct answer carries 1 mark and for each wrong answer 1/3 mark will be deducted. No negative mark for unattended questions.**
12. No candidate will be allowed to leave the examination hall till the end of the session and without handing over his/her Answer Sheet to the Invigilator. Candidates should ensure that the Invigilator has verified all the entries in the Register Number Coding Sheet and that the Invigilator has affixed his/her signature in the space provided.
13. Strict compliance of instructions is essential. Any malpractice or attempt to commit any kind of malpractice in the Examination will result in the disqualification of the candidate.

100/2018

1. Garo Hills is located in :
(A) Orissa (B) Assam (C) Meghalaya (D) Tamil Nadu
2. Of the following personalities who prepared a Report on Estimation of Poverty ?
(A) Abhijit Banerjee (B) Aravind Panagarye
(C) Amiya Kumar Bagchi (D) Suresh Tendulkar
3. Identify the Central Government Scheme which is **not** related with Child Development :
(A) NMBS (B) JSY (C) PMMVY (D) NOAPS
4. Silent Valley National Park was formally inaugurated by :
(A) Indira Gandhi (B) V.P. Singh
(C) P.V. Narasimha Rao (D) Rajiv Gandhi
5. Asia's first Butterfly Safari Park is at :
(A) Thenmala (B) Bennarghatta
(C) Thumboormuzhy (D) Gurugram
6. The draft of Fifth Five Year Plan was prepared and launched by :
(A) D.T. Lakdawala (B) D.P. Dhar
(C) P.C. Mahalanobis (D) T.N. Sanker
7. The painting 'Relief of Lucknow' is related with :
(A) Lucknow Pact (B) 1857 Revolt
(C) Partition of India (D) Chouri - Choura
8. Who was the Viceroy at the time of Salt March ?
(A) Lord Linlithgow (B) Lord Chelmsford
(C) Lord Irwin (D) Lord Wavell

9. Who was the elected president of the Gaya session of Indian National Congress ?
(A) C.R. Das (B) Motilal Nehru
(C) Hakim Ajmal Khan (D) Lala Lajpath Rai
10. The Arya Samaj was founded in the year :
(A) 1883 (B) 1893 (C) 1873 (D) 1875
11. Christu Mada Chedanam was written by :
(A) Sree Narayanaguru (B) Chattambi Swamikal
(C) Poikayil Yohannan (D) Blessed Kuriakose Elias Chavara
12. The first Malayalam poet who appeared in postal stamps :
(A) Kumaranasan (B) Lalithambika Antharjanam
(C) Ulloor S. Parameswara Iyer (D) Vallathol Narayana Menon
13. The quarterly literary journal Vivekodayam was established in :
(A) 1888 (B) 1904 (C) 1903 (D) 1886
14. Ananda Sutram was written by :
(A) Thycaud Ayya (B) V.T. Bhattathirippad
(C) Brahmananda Swami Sivayogi (D) Ayya Vaikundar
15. Ritty Lukose describes whom as the "Political Father" of Ezhavas ?
(A) Sree Narayanaguru (B) Sahodaran Ayyappan
(C) Dr. Palpu (D) C. Kesavan
16. Christmas Island in Indian ocean belongs to which country ?
(A) New Zealand (B) China (C) Australia (D) North Korea
17. Who is the present Chairman of Kerala Lalithakala Academy ?
(A) Nemom Pushparaj (B) Sathyapal
(C) Vaisakhan (D) K.J. Kuttappan

18. Which is the Merriam-Webster dictionary's word of the year for 2017 ?
(A) Socialism (B) Surreal (C) Terrorism (D) Feminism
19. The 15th Trilateral Meeting of foreign ministers of Russia-India-China (RIC) took place in :
(A) Moscow (B) New Delhi (C) Beijing (D) Hong Kong
20. Operation launched by India to provide assistance for Rohingya refugees in Bangladesh is named as :
(A) Operation Insaniyat (B) Operation Manavatha
(C) Operation Brotherhood (D) Operation Humane
21. Crow foot is a special tool related to :
(A) Screw driver (B) Socket attachments
(C) Torque wrench (D) Pipe wrench
22. The least count of industrial depth micrometer is usually :
(A) 0.01 cm (B) 0.001 mm (C) 0.01 mm (D) 0.02 mm
23. Which chisel is used for removing metals after chain drilling ?
(A) Cross cut chisel (B) Diamond point chisel
(C) Flat chisel (D) Web chisel
24. A protective metal ring to prevent damage of tool handle is called :
(A) Ferrule (B) Tang (C) Heel (D) Edge
25. The tolerance zone of hole will be below the tolerance zone of shaft is called :
(A) Clearance fit (B) Transition fit (C) Interference fit (D) Tolerance fit
26. The point angle of general purpose drill bit is :
(A) 158° (B) 118° (C) 119° (D) 110°
27. Which key is useful for fastening tapered fittings of shaft ?
(A) Woodruff key (B) Saddle key (C) Sunk key (D) Gib-head key

28. In a Double cut file angle of Overcut is usually :
(A) 65° (B) 51° (C) 70° (D) 60°
29. Which one is the physical property of metal given below ?
(A) Hardness (B) Colour (C) Malleability (D) Tenacity
30. Which punch will give good punch mark for seating of drill bit ?
(A) Centre punch (B) Prick punch 30°
(C) Prick punch 60° (D) Hollow punch
31. Which type nut to protect the end of the bolt from damages ?
(A) Thumb nut (B) Wing nut (C) Cap nut (D) Grooved nut
32. Which one is other than file grade ?
(A) Rough (B) Single cut (C) Second cut (D) Bastard
33. How many diodes in an alternator for rectification purpose ?
(A) 6 (B) 3 (C) 2 (D) 4
34. The colour of Acetylene cylinder in an Oxy Acetylene gas welding :
(A) Black (B) Red (C) Maroon (D) Brown
35. The firing order of a six cylinder engine is :
(A) 1-5-6-3-2-4 (B) 1-4-2-6-3-5 (C) 1-6-3-2-4-5 (D) 1-5-2-4-6-3
36. Gas leakage between cylinder wall and piston is called :
(A) Bleeding (B) Cylinder leakage
(C) Blow by (D) Scavenging
37. The power interval of 3 cylinder engine is :
(A) 240° (B) 120° (C) 180° (D) 90°

38. The distance between the axis of crankpin and main journal is called :
(A) Crank web (B) Crankthrow (C) Crankcase (D) Crank thrust
39. The lack of tappet clearance will cause :
(A) Valve lag (B) Valves are not open
(C) Valves are not fully closed (D) Engine over heat
40. Excessive backlash of oil pump gears will cause :
(A) Reduce pressure (B) Increase pressure
(C) Oil leakage (D) No effect
41. What is the cause of excessive end play of crankshaft ?
(A) Worn out crankshaft (B) Worn out thrust bearing
(C) Worn out crankpin (D) Worn out shell bearing
42. Commonly used lapping abrasives are :
(A) Silicon carbide (B) Aluminium oxide
(C) Boron carbide (D) All of these
43. A three way catalytic convertor converts :
(A) CO, HC and NO_x (B) CO, HC and CO₂
(C) CO, HC and SO₂ (D) CO, HC and Particulate matter
44. In an engine evaporative emission controls :
(A) EGR (B) Canister
(C) Catalytic converter (D) SCR
45. In an engine cylinder bore and stroke are equal is called :
(A) Radial engine (B) Opposed engine
(C) Square engine (D) Under square engine
46. Product of swept volume and no. of cylinder is called :
(A) Cycle (B) Compression ratio
(C) Horse Power (D) Engine capacity

47. The radiator core is made of :
(A) Aluminium (B) Steel (C) Brass (D) Zinc
48. In a Pneumatic governor engine vacuum pipe will broken :
(A) Engine stops (B) Run at full RPM
(C) Run at idle RPM (D) Not effect seriously
49. Which tool is used for removing taper shank drill bit ?
(A) Morse taper (B) Drill chuck
(C) Drift (D) Mallet
50. The type of piston more contact with cylinder at thrust face is called :
(A) Slipper piston (B) Solid skirt piston
(C) Cam ground piston (D) Cavity piston
51. Waste gate is the part of _____.
(A) Water Pump (B) Exhaust System
(C) Turbo Charger (D) Positive Crankcase Ventilation
52. An exhaust gas recirculation system helps to reduce :
(A) CO₂ emission (B) CO emission (C) HC emission (D) NO_x emission
53. The locking screw of vernier caliper is :
(A) Thumb screw (B) Grub screw (C) Set screw (D) Allen screw
54. Isolate the fire from the supply of oxygen by blanketing is called :
(A) Starving (B) Smothering (C) Cooling (D) Extinguishing
55. Engine temperature gauge will shows the temperature of :
(A) Engine coolant (B) Engine block
(C) Exhaust gas (D) Combustion temperature
56. _____ is capable of self-aligning components with threaded hole.
(A) Grub screw (B) Allen screw
(C) Thumb screw (D) Counter sink screw

57. Which type chisel is suitable for cutting keyway and grooves ?
(A) Diamond point chisel (B) Cape chisel
(C) Flat chisel (D) Half round chisel
58. The actual power developed in the engine cylinder is called :
(A) BHP (B) FHP (C) Engine power (D) IHP
59. How to test the short circuit of stator winding of alternator ?
(A) Connect the test lamp in series between each stator lead
(B) Connect the test lamp in series between stator laminator and each stator lead
(C) Connect the test lamp in parallel between stator laminator and stator lead
(D) Check the continuity between the stator leads
60. Which type valves are suitable in air compressors ?
(A) Reed valve (B) Rotary valve (C) Sleeve valve (D) Poppet valve
61. What is the necessity of locking lip in crankshaft bearings ?
(A) Better grip (B) Avoid rotation of bearing
(C) Better lubrication (D) Both (A) and (C)
62. What is the result of taper and ovality of engine bore ?
(A) Increase blow by (B) High oil consumption
(C) Piston slapping (D) All of these
63. Which type lubrication system has a separate oil tank besides oil sump ?
(A) Dry sump system (B) Pressure system
(C) Combined lubrication system (D) Bypass system
64. A diesel fuel feed pump is driven by _____.
(A) FIP camshaft (B) Engine camshaft
(C) Engine crankshaft (D) Either (A) or (B)

65. Which tool is used to mark large circles in sheet metal work ?
(A) Divider (B) Scriber (C) Trammel (D) Surface gauge
66. Which heat treatment process metal cools slowly in the furnace ?
(A) Normalizing (B) Tempering (C) Hardening (D) Annealing
67. In actual valve timing the inlet valve close :
(A) At BDC (B) Before BDC (C) After BDC (D) After TDC
68. Cast iron surface plate is designated by their length, breadth, _____.
(A) Grade and IS No. (B) Shape and IS No.
(C) Grade and material (D) Grade and shape
69. While compression stroke a little time taken combustion, after the injection of fuel, this period is called :
(A) Knock period (B) Uncontrolled combustion
(C) Controlled combustion (D) Ignition delay
70. A cold starting device of Diesel engine is called :
(A) Choke (B) Glow plug (C) Atomizer (D) Tickler
71. A special equipment Growler is used for checking :
(A) Short circuit of stator winding
(B) Commutator
(C) Short circuit of armature winding
(D) Solenoid winding
72. Which statement is **true** ?
(A) Octane rating means the ignition quality of diesel fuel
(B) Thermostat valve always open, the engine will over heat
(C) PCV valve is related to fuel system
(D) Turbo charger helps to increase volumetric efficiency

73. What is the necessity of flywheel ring gear ?
(A) Starting purpose (B) Power transmission
(C) Balancing flywheel (D) Identifying timing
74. The ability of metal to resist the effect of tensile force without rupturing :
(A) Elasticity (B) Plasticity (C) Ductility (D) Tenacity
75. The carbon content of cast iron is usually :
(A) 2 to 4.5% (B) More than 5% (C) 0.1 to 0.5% (D) Less than 0.1%
76. The rear end of crankshaft is fitted as :
(A) Timing gear (B) Vibration damper
(C) Clutch assembly (D) Flywheel
77. In CRDI engine which type fuel pump is used ?
(A) Jerk type pump (B) Rotary pump
(C) High pressure pump (D) Distributor VE pump
78. In an alternator electricity is generated at :
(A) Stator (B) Rotor (C) Regulator unit (D) Diode rectifier
79. Which type lubrication is used in 2 stroke engine ?
(A) Splash lubrication (B) Pressure lubrication
(C) Petroil lubrication (D) Dry sump lubrication
80. The word polarity is related to _____ welding.
(A) AC arc (B) DC arc
(C) Oxy-Acetylene gas (D) Resistance
81. The process of making leak proof joint after riveting is called :
(A) Brazing (B) Soldering
(C) Folding (D) Caulking and Fullering

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82. A radiator pressure cap contains :
(A) Pressure and vacuum relief valve
(B) Pressure relief valve
(C) Vacuum relief valve
(D) Over flow valve
83. What is the cause of engine over heating ?
(A) Thermostat valve always open
(B) Run at high RPM
(C) Injector pressure is more
(D) Broken fan belt
84. What is calibration of FIP ?
(A) Correcting injection angle
(B) Correcting element angle
(C) Correcting quantity of fuel delivered
(D) All of these
85. For better wear protection Micrometer spindle is made of :
(A) Tungsten tip (B) Carbide tip (C) Carbon tip (D) Diamond tip
86. A worn out anvil tip of outside micrometer shows :
(A) Positive error (B) Zero error
(C) Negative correction (D) Negative error
87. The portion below the piston pin is called :
(A) Piston land (B) Piston head (C) Piston skirt (D) Piston pin boss
88. After turn off engine, the position of FIP element in :
(A) Maximum fuel delivery (B) Minimum fuel delivery
(C) Zero fuel delivery (D) None of these

89. To increase the strength of material, the point angle of chisel will be :
(A) Decrease (B) Increase (C) Not affecting (D) None of these
90. The compression ratio of diesel engine is up to :
(A) 10 : 1 to 16 : 1 (B) 6 : 1 to 12 : 1
(C) 12 : 1 to 18 : 1 (D) 22 : 1 to 24 : 1
91. In a 2 stroke engine charge is first enter into :
(A) Cylinder block (B) Crankcase
(C) Combustion chamber (D) Transfer port
92. Engine camshaft is made of :
(A) Cast iron (B) Mild steel
(C) Cast alloy steel (D) Forged alloy steel
93. In a screw thread M18 stands :
(A) Metric thread, 18 mm length
(B) Metric thread, 18 cm length
(C) Metric thread, 18 mm Nominal Diameter
(D) Major Diameter 18 mm
94. The example of positive locking device is :
(A) Castle nut (B) Lock nut (C) Spring washer (D) Wing nut
95. The distance between TDC and BDC is called :
(A) Swept volume (B) Cycle (C) Cylinder bore (D) Stroke length
96. Which type camshaft drive mechanism no need of lubrication ?
(A) Chain drive (B) Belt drive (C) Gear drive (D) None of these

97. In a diesel Fuel system filter is situated :
- (A) between Fuel tank and Feed pump
 - (B) between FIP and Injector
 - (C) between Feed pump and FIP
 - (D) inside of Fuel tank
98. Worn out main bearings cause :
- (A) Increase oil pressure
 - (B) Decrease oil pressure
 - (C) No change in oil pressure
 - (D) Oil leakage
99. Connecting rod small end bearing is usually :
- (A) Shell bearing
 - (B) Thrust bearing
 - (C) Foot step bearing
 - (D) Bush bearing
100. The relation between Stroke length and Crankthrow is :
- (A) $\text{Stroke} = 2 \times \text{Crankthrow}$
 - (B) $\text{Stroke} = 2 + \text{Crankthrow}$
 - (C) $\text{Stroke} = \text{Crankthrow} / 2$
 - (D) $\text{Stroke} = 4 \times \text{Crankthrow}$

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SPACE FOR ROUGH WORK

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