

068/2018

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.

068/2018

1. The Indian Constitution is regarded as _____.
(A) Federal in form and unitary in spirit
(B) Federal
(C) Unitary
(D) Parliamentary

2. Which of the following is **not** a fundamental right ?
(A) Right against exploitation (B) Equal pay for equal work
(C) Equality before law (D) Freedom of Religion

3. Indian Constitution provides for a _____.
(A) Unitary System (B) Presidential System
(C) Bicameral System (D) Unicameral System

4. Plebiscite is used for _____.
(A) Enactment of Laws
(B) Appointment of Civil Servants
(C) Appointment of Judges
(D) Ascertaining the views of people on a policy matter of public importance

5. A candidate seeking election to a State Legislative Assembly must have completed the age of _____.
(A) 25 years (B) 30 years (C) 21 years (D) 40 years

6. The Right to Information Act (RTI) was passed in India in _____.
(A) 2013 (B) 2005 (C) 2017 (D) 2016

7. The Prevention of Atrocities Act, 1989 was passed for _____.
(A) Preventing corruption
(B) Preventing theft
(C) Preventing atrocities against SC/ST people
(D) Preventing atrocities against politicians

A

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{P.T.O.}

8. National Food Security Act was passed in India in _____.
(A) 2005 (B) 2001 (C) 2010 (D) 2013
9. The Western System of education was introduced in India by _____.
(A) Lord Macaulay (B) Lord Dalhousie
(C) Lord Cornwallis (D) None of the above
10. The man known as father of modern India is _____.
(A) Vivekananda (B) Rajaram Mohan Roy
(C) Mahatma Gandhiji (D) Indira Gandhi
11. Chattampi Swamikal was a _____ reformist.
(A) Ezhava (B) Pulaya (C) Nair (D) Tribal
12. 'Sahodara Sangam' was founded by _____.
(A) K. Kelappan (B) Ulloor (C) Kumaranasan (D) Ayyappan
13. The leader of Guruvayoor Satyagraha was _____.
(A) K. Kelappan (B) Ayyappan
(C) Chattampi Swamikal (D) Gandhiji
14. Who discovered the South-West Monsoon ?
(A) Marco polo (B) Ma Huan (C) Hippalus (D) Fahien
15. George Eliot was the pen name of _____.
(A) King George - V (B) Hamilton
(C) Homer (D) Mary Ann Evans
16. The first book printed by Guttenberg was _____.
(A) Khuran (B) Bible (C) News paper (D) Mahabharata

17. Calligraphy is _____.
- (A) The art of beautiful and stylised writing
(B) The art of painting
(C) The method of reading
(D) The method of printing
18. Philanthropist works for _____.
- (A) Animals (B) Birds
(C) Social upliftment (D) Environment
19. The Nathula pass connects India to _____.
- (A) Nepal (B) Burma (C) China (D) Pakistan
20. The first Woman player to cross 6000 runs in ODI (One Day International) Cricket World Cup is _____.
- (A) P. Sindhu (B) Sonali
(C) Karnam Malleswari (D) Mithali Raj
21. The heart of the ignition system circuit and component is :
- (A) Condenser (B) Ignition coil (C) Generator (D) Distributor
22. When the clutch is disengaged position as a result :
- (A) The power is transmitted (B) The power is not transmitted
(C) The power is in neutral position (D) None of the above
23. Most of the gear box casings are made of :
- (A) High carbon steel (B) Mild steel
(C) Chromium steel (D) Aluminium alloy
24. The brake fluid has the characteristics like :
- (A) Velocity and pressure (B) Velocity and speed
(C) Viscosity and boiling point (D) Velocity and boiling point

25. How many cells are used in 12 volt automobile battery ?
(A) 3 (B) 4 (C) 8 (D) 6
26. If the air fuel mixture ignites before the spark takes place at spark plug is called :
(A) Penetration (B) Detonation (C) Oxidization (D) Pre-ignition
27. What is the reason behind using aluminium alloy to make cylinder blocks ?
(A) Light in weight and has good heat dissipation
(B) Low in material cost
(C) Good look in colour
(D) Heavy weight and poor heat dissipation
28. The thermal efficiency of the 4 stroke engine is :
(A) Low (B) Medium (C) High (D) Normal
29. The inlet valve generally opens about 15 degree before TDC is called :
(A) Valve lag (B) Valve lead
(C) Valve twist (D) None of the above
30. In a 4 stroke cycle engine each cylinder has :
(A) Two parts (B) Four valves (C) One valve (D) Two valves
31. The operation of removing trapped air from the hydraulic brake system is known as :
(A) Exhausting (B) Trapping (C) Bleeding (D) Ventilation
32. When a vehicle is moving on straight level road and the resistance affecting both the driving wheels is the :
(A) Lower (B) Higher (C) Normal (D) Same
33. Which of the following is **not** a part of differential gear box ?
(A) Star pinion (B) Axle shaft (C) Drive pinion (D) Crank shaft
34. The shape of reflector used for automobile head lamp is :
(A) Circle (B) Spherical (C) Parabolic (D) Elliptical

35. The leaf springs are generally made of :
- (A) Cast steel (B) High carbon steel
(C) Cast iron (D) Spring steel
36. The backward tilt of the king pin and axle at the top is called :
- (A) Camber angle (B) Toe - in
(C) King pin inclination (D) Caster angle
37. The oil pump of the automobile engine is driven by the :
- (A) Cam shaft (B) Gear shaft
(C) Follower shaft (D) Crank shaft directly
38. The clutch unit coil springs are located in between the pressure plate and the :
- (A) Disc unit (B) Battle
(C) Fly wheel (D) Clutch cover
39. The wheel base of a auto car is :
- (A) The distance between the rear tyres
(B) The distance between the front tyres
(C) Length of the vehicle
(D) The distance between the centre of the front and rear wheels
40. The capacity of a lead acid battery is usually expressed in :
- (A) Ohms (B) Volt (C) Ampere - hours (D) Ampere
41. _____operates contact breaker points of ignition system.
- (A) Generator (B) Starting motor (C) Regulator (D) Engine
42. When the clutch operates in an oil bath, it is called :
- (A) Dry type clutch (B) Wet clutch
(C) Single plate clutch (D) Centrifugal clutch

43. _____ brings back brake shoes in their original position.
 (A) Compression spring (B) Tension spring
 (C) Refracting spring (D) Coil springs
44. The main advantage of coil spring is that it doesn't make :
 (A) Wear and tear (B) Braking tendency
 (C) Noise problem (D) None of the above
45. The air fuel ratio of a rich mixture is about :
 (A) 8 : 1 (B) 9 : 1 (C) 13 : 1 (D) 10 : 1
46. The acid used in lead acid battery is :
 (A) Hydrofluoric acid (B) Nitric acid
 (C) Hydrochloric acid (D) Sulphuric acid
47. _____ gear is used to check straightness, end play of shafts, run out of wheels and back lash of gears.
 (A) Vacuum gauge (B) Pressure gauge
 (C) Dual gauge (D) Feeler gauge
48. The volumetric efficiency of two stroke engine is :
 (A) Medium (B) Normal (C) Less (D) High
49. The heavy lubricating oil has :
 (A) Low viscosity (B) Normal viscosity
 (C) High viscosity (D) None of the above
50. The firing order of 6 cylinder in-line engine is usually :
 (A) 1 - 3 - 4 - 2 - 5 - 6 (B) 1 - 5 - 3 - 6 - 2 - 4
 (C) 1 - 3 - 5 - 2 - 3 - 4 (D) 1 - 4 - 5 - 3 - 6 - 2
51. The mixing of air and fuel in diesel engine occurs in :
 (A) Carburettor (B) Fuel pump (C) Fuel injector (D) Engine cylinder

52. The CB point gap is measured by using :
 (A) Micrometer (B) Caliper (C) Pitch gauge (D) Feeler gauge
53. The most effective air cleaner for diesel engine is :
 (A) Wet type air cleaner (B) Dry type air cleaner
 (C) Water bath air cleaner (D) Oil bath air cleaner
54. The most commonly used car heater is :
 (A) Diesel type (B) Petrol type (C) Hot water type (D) Hot air type
55. Piston displacement of an engine is :
 (A) Volume of cylinder \times Stroke \times No. of cylinders
 (B) Pressure of cylinder \times No. of cylinder \times Stroke
 (C) Area of cylinder \times Stroke \times No. of cylinders
 (D) Area of cylinder \times Stroke volume \times No. of cylinder
56. The angle between the central plane of tyre and the direction of motion is known as :
 (A) Tracking (B) Turning radius (C) Slip angle (D) Toe - out
57. The firing order for an in -line 4 cylinder IC engine is :
 (A) 1 - 3 - 2 - 4 (B) 1 - 2 - 3 - 4 (C) 1 - 3 - 4 - 2 (D) 1 - 2 - 4 - 3
58. The brake drum is made of :
 (A) Aluminium alloy (B) Spring steel
 (C) High carbon steel (D) Cast iron
59. The vibrations of single dry plate clutch are absorbed by :
 (A) Pressure plate (B) Centre hub (C) Clutch Linkage (D) Torsional spring
60. The trouble of an engine misfiring is likely to result from :
 (A) Incorrect air fuel mixture (B) Air lock in the fuel lines
 (C) Damage of ignition coil winding (D) Spark plug gap is too wide

61. The relationship between resistance, current, and voltage can be expressed in the form of an equation known as :
 (A) Charle's Law (B) Faraday's Law (C) Flemming's Law (D) Ohm's Law
62. Most of the multi speed gear boxes contains :
 (A) 3 shaft (B) 4 shaft (C) 2 shaft (D) 5 shaft
63. Brake fluid is a mixture of :
 (A) Grease and diesel (B) Petrol and grease
 (C) Petroleum oil and grease (D) Glycerine and alcohol
64. The fluid generally used in shock absorber is a mixture of :
 (A) 40% SAE 40 oil and 60% transformer oil
 (B) 40% SAE 90 oil and 60% turbine oil
 (C) 60% transformer oil and 40% turbine oil
 (D) 60% turbine oil and 40% transformer oil
65. The calorific value of diesel fuel is about :
 (A) 30.5 mJ/kg (B) 50 mJ/kg (C) 45 mJ/kg (D) 42.5 mJ/kg
66. The air gap between the central electrode and ground electrode of a spark plug is around :
 (A) 0.3 mm (B) 0.02 mm (C) 1.2 mm (D) 1 mm
67. The total piston displacement of all the engine cylinder is called :
 (A) Compression ratio (B) Engine torque
 (C) Engine capacity (D) Engine cycle
68. In petrol engine the compression ratio varies from :
 (A) 5 : 1 to 7 : 1 (B) 9 : 1 to 11 : 1 (C) 6 : 1 to 8 : 1 (D) 6 : 1 to 9 : 1
69. The thermostat valve which is opened automatically by means of :
 (A) High temperature whenever engine desires cooling
 (B) Low temperature
 (C) Water pressure
 (D) Automatic switch

70. The dilution of lubricating oil is caused by :
(A) Worn off particles (B) Water
(C) Solid contaminants (D) Fuels
71. The brake lines in hydraulic brake system are made of :
(A) Plastic (B) Rubber (C) Aluminium (D) Steel
72. _____ brings back shoes in their original position when the brakes are not applied.
(A) Compression spring (B) Retracting spring
(C) Pressure spring (D) Torsion spring
73. The frictional horse power of a well adjusted petrol engine should be nearly :
(A) 20% (B) 50% (C) 15% (D) 10%
74. The automobile body should be sufficiently rigid so as to resist twisting on bad roads, is known as :
(A) Air drag (B) Lightness
(C) Stiffness (D) Torsional stiffness
75. _____ types of gear boxes are generally used in motor cycles.
(A) Synchronising gear boxes (B) Constant mesh
(C) Epicyclic (D) Progressive type
76. If the engine coolant leaks into the engine oil as a result :
(A) Oil becomes thick oil (B) Turns into black colour
(C) Appears milky stage (D) None of the above
77. The main function of an alternator in an automobile is to :
(A) Convert chemical energy into electrical energy
(B) Convert mechanical energy into electrical energy
(C) Convert mechanical energy into chemical energy
(D) Continually recharge the automobile battery

78. The purpose of crank case ventilation is to :
(A) Remove oil from the crank case (B) Remove harmful particles from the engine
(C) Remove air from the crank case (D) All of the above
79. The main function of a governor in an automobile is to :
(A) Maintain constant speed (B) Minimize the fuel economy
(C) Minimize the engine power (D) Limit the vehicle speed
80. The advantage of both brazing and soldering is :
(A) Lower production cost
(B) Good availability of materials
(C) Less maintenance charge
(D) Many similar and dissimilar materials can be joined
81. The function of cross wire grooves tyre is :
(A) Better steering properties (B) Good traction
(C) Better load carrying capacity (D) Absorb shocks due to road unevenness
82. A Rotameter is a device used to measure :
(A) Velocity of fluid (B) Pressure of fluid
(C) Volume flow rate of fluid (D) Density of the fluid
83. ABS stands for :
(A) Automatic Braking System (B) Antilock Braking System
(C) Advanced Braking System (D) None of the above
84. Newton - meter is the unit of :
(A) Energy (B) Torque (C) Power (D) Work
85. The level of carbon monoxide in the exhaust gases is controlled by :
(A) Oxidization (B) Fillerization
(C) Carbonization (D) Emission control

86. The process in which the volume remains constant is :
(A) Isobaric process (B) Isochoric process
(C) Isothermal process (D) Isentropic process
87. The exhaust valves are generally made of :
(A) High carbon steel (B) Copper alloy
(C) Vanadium steel (D) Silichrome steel
88. The roller bearings are used in :
(A) Light load vehicle (B) Heavier load vehicle
(C) Light and heavy load vehicles (D) None of the above
89. The clutch facings are usually attached to the plate by :
(A) Copper screws (B) Aluminium rivets
(C) Brass rivets (D) None of these
90. The bottom ring on the piston is known as :
(A) Compression ring (B) Oil compression ring
(C) Grove ring (D) Slip ring
91. The quantity of heat produced by fuel combustion is called :
(A) Volatility (B) Anti knock value
(C) De-carbonization (D) Calorific value
92. The tool used to measure the shaft run-out is the :
(A) Caliper (B) Steel rule (C) Feeler gauge (D) Micrometer
93. Universal joint which enables the drive shaft to transmit power at :
(A) Vertical angle (B) Parallel angle
(C) Varied angle (D) None of the above
94. The torque available at the contact between driving wheels and road is called :
(A) Brake effort (B) Gear effort (C) Clutch effort (D) Tractive effort

95. _____ type of starting motor is generally used in automobiles.
- (A) Shunt motor (B) Compound motor
(C) Induction motor (D) Series motor
96. Which one of the following is **not** a part of the chassis ?
- (A) Front axle (B) Chassis frame
(C) Rear axle (D) Passenger seat
97. The main purpose of transmission in an automobile is :
- (A) To vary the power of automobile
(B) To vary the speed of the vehicle
(C) To vary the torque at the road wheels
(D) To vary the pressure at the road wheel
98. For loosening of cylinder head bolts we should prefer to use :
- (A) Double end spanner (B) Adjustable spanner
(C) Ring spanner (D) Torque wrench
99. The types of wheels preferred in sports cars are :
- (A) disc wheel (B) wire wheel
(C) magnesium alloy wheel (D) aluminium alloy wheel
100. For identification the colour of tail light in a car is :
- (A) White (B) Red (C) Green (D) Yellow

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SPACE FOR ROUGH WORK

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