

**153/2024**

Maximum : 100 marks

Time : 1 hour and 30 minutes

1. Trade registration mark and number shall be exhibited on front and rear of the vehicle :
  - (A) In white colour on red background
  - (B) In red colour on yellow background
  - (C) In yellow colour on black background
  - (D) In black colour on white background
  
2. The Licensing Authority disqualify from holding a driving licence, for which of the following acts by a holder of driving licence :
  - (A) Theft of goods carried in goods carriages
  - (B) Smoking while driving public service vehicles
  - (C) Failure to stop when signaled to do so by any person authorised to do so
  - (D) All of the above
  
3. Whoever, while driving a motor vehicle is drunken or under the influence of drugs shall be punishable for the first offence with fine which may extend to \_\_\_\_\_ rupees.
  - (A) 5,000
  - (B) 10,000
  - (C) 15,000
  - (D) 20,000
  
4. The person authorized to inspect a public service vehicle is in a public place as per Rule 231 of Kerala Motor Vehicles Rule 1989 :
  - (A) Any officer of the Motor Vehicles Department not below the rank of Assistant Motor Vehicles Inspector
  - (B) The District Collector of the respective District
  - (C) Any Minister of the Government
  - (D) All of the above
  
5. A person holding effective learner's licence to drive a vehicle while receiving instructions or gaining experience in driving, there is painted, in the front and the rear of the vehicle, the letter "L" :
  - (A) in red on a white background
  - (B) in white on a red background
  - (C) in red on a yellow background
  - (D) in yellow on a red background

6. Every public and private hospital shall publish a charter in Hindi, English and vernacular language, at the entrance or other conspicuous location, and on their website, stating the rights of :
- (A) Drivers (B) Doctors  
(C) Good Samaritans (D) Hospital management
7. While approaching pedestrian crossing, the driver shall slowdown, stop and give way to pedestrians. A vehicle shall not be stopped on, or \_\_\_\_\_ meters before, a pedestrian crossing :
- (A) 05 (B) 04  
(C) 03 (D) 02
8. \_\_\_\_\_ means the bringing of a vehicle to a stationary position and causing it to wait for any purpose other than that of immediately taking up or setting down persons, goods or luggage, and includes stopping for more than three minutes.
- (A) Waiting (B) Parking  
(C) Riding (D) Halting
9. A vehicle shall not make a 'U' turn :
- (A) Where such 'U' turn is prohibited by a road sign or a traffic signal  
(B) On a major road, highway or expressway  
(C) Across a continuous single or a double solid line  
(D) All of the above
10. The priority within the emergency vehicles shall be as follows :
- (A) First ambulance, second fire service vehicle, third police service vehicle  
(B) First ambulance, second police service vehicle, third fire service vehicle  
(C) First fire service vehicle, second ambulance, third police service vehicle  
(D) First fire service vehicle, second police service vehicle, third ambulance
11. While towing another vehicle which of the following statement is correct?
- (A) Speed shall not exceed 25 kmph  
(B) Speed shall not exceed 40 kmph  
(C) There is no speed restriction observe the allowed speed of specific road  
(D) Speed shall not exceed 60 kmph in a four-lane road and 30 kmph on other roads

12. When you approach a junction/intersection of a road you see rapid intermittent flashes of amber light from a traffic control signal, what you suppose to do?
- (A) Stop and wait for green light to flash
  - (B) Do nothing, continue driving if you feel safe to do so
  - (C) Compulsory slowdown look and go
  - (D) Amber light represents shopping area you are permitted to park and shop
13. Maximum speed allowed for a motor cycle on different roads in Kerala (1), NH six lane road (2), NH four lane road (3), City limits :
- (A) (1) 110 kmph (2) 100 kmph (3) 50 kmph
  - (B) (1) 80 kmph (2) 80 kmph (3) 40 kmph
  - (C) (1) 60 kmph (2) 60 kmph (3) 50 kmph
  - (D) (1) 70 kmph (2) 60 kmph (3) 25 kmph
14. Which of the following statement is most correct?
- (A) You can stop vehicle anywhere in left side of road if there is sufficient space for other vehicles to pass (obeying give way rule)
  - (B) No stopping in bridges, near or on a sharp bend and at designated bus stands if the vehicle is other than a bus
  - (C) No stopping in four lane road, city road and service road
  - (D) Can stop in front of a shop in city limits if there is enough space and amber light blinking
15. Which of the following statement is/are correct about overtaking?
- (1) Overtaking not allowed at curves, bridges, uphill, downhill, presence of oncoming traffic and school zone.
  - (2) Overtaking not allowed where continuous white/yellow line in the middle of the road.
  - (3) Overtaking not allowed where broken white line in the middle of the road.
- (A) Statement (1) and (2) are correct
  - (B) Statement (2) and (3) are correct
  - (C) Only (1) is correct
  - (D) All of above are correct

16. While driving in a four-lane/six lane road which of the following statement is/are correct?
- (A) You can drive in right lane of four lane road if there are no other vehicles passing in same direction since you are driving in maximum allowed speed
  - (B) Even if there are no vehicles in the direction you are driving and driving at max speed allowed, you drive on left lane of road
  - (C) Since there are no other vehicle on road you can drive slowly or any speed allowed for particular vehicle in middle lane of six lane road
  - (D) All of above are correct
17. Which of the below statement is correct regarding maximum wattage of head lamp if the bulb is a halogen type?
- (A) Motor cycle below 150 cc – 35 W, LMV – 55 W
  - (B) Motor cycle below 150 cc – 55 W, LMV – 75 W
  - (C) Motor cycle below 150 cc – 35 W, LMV – 75 W
  - (D) Motor cycle below 150 cc – up to 55 W, LMV up to 100 W
18. Select correct fine/punishment for offences :
- (1) Driving uninsured vehicle.
  - (2) Sound the horn needlessly or continuously or at prohibited area
  - (3) Polluting vehicle
- |                               |                                 |
|-------------------------------|---------------------------------|
| (A) (1) 1000 (2) 250 (3) 2000 | (B) (1) 2000 (2) 500 (3) 10000  |
| (C) (1) 1000 (2) 750 (3) 2000 | (D) (1) 2000 (2) 1000 (3) 10000 |
19. A motor vehicle is allowed to driven on to public road in the reverse direction if :
- (A) There is a attendant helps you to stop oncoming traffic
  - (B) You watch carefully in the mirrors and reverse camera and you feel it is safe to go
  - (C) Both (A) and (B)
  - (D) Do not reverse/not allowed
20. What does Section 134 of the Motor Vehicles Act, 1988 describes?
- (A) Leaving vehicles in dangerous positions
  - (B) Duty of a driver in case of an accident and injury to a person
  - (C) Driving when mentally or physically unfit to drive
  - (D) Limits of speed

21. What does a driver's right hand extended straight out of the window and shall swing the arm backward and forward in a semi circular motion indicate?
- (A) Intention is to slow down his vehicle
  - (B) Intention is to turn the vehicle right
  - (C) Intention is to turn the vehicle left
  - (D) The intention is to permit the driver behind to overtake
22. What does a flashing amber (yellow) traffic light mean?
- (A) Stop immediately
  - (B) Proceed with caution
  - (C) Traffic must turn left
  - (D) Pedestrians must cross
23. What does a solid yellow line in the center of the road next to a broken yellow line indicate?
- (A) Overtaking is prohibited from both sides
  - (B) Overtaking is permitted only from the side with the broken line
  - (C) Overtaking is allowed in both directions
  - (D) No stopping or parking on either side
24. What does a Blue round road sign with a red border and red oblique bars inside typically indicate?
- (A) No overtaking zone
  - (B) No entry for vehicles
  - (C) No stopping or standing
  - (D) Speed limit zone
25. What is the maximum permissible speed limit for passenger vehicles on road with in city limit in Kerala?
- (A) 50 km/h
  - (B) 60 km/h
  - (C) 80 km/h
  - (D) 100 km/h
26. Which IRC standard provides guidance on the design of lane widths on roads?
- (A) IRC 73
  - (B) IRC 35
  - (C) IRC 64
  - (D) IRC 86

27. Which type of junction is designed to facilitate smooth traffic flow and reduce delay at intersections?
- (A) Roundabout (B) T-Junction  
(C) Crossroad Junction (D) Staggered Junction
28. In the context of road design, what is the primary function of a bypass?
- (A) To provide a scenic route  
(B) To divert traffic away from congested urban areas  
(C) To facilitate local traffic  
(D) To connect two highways
29. What is the minimum sight distance recommended for a vertical curve at a road junction with a design speed of 80 km/h?
- (A) 60 meters (B) 90 meters  
(C) 120 meters (D) 150 meters
30. What is the penalty for not wearing a seatbelt while driving on a flyover in Kerala?
- (A) Rs. 500 fine (B) Rs. 1000 fine  
(C) License suspension (D) Imprisonment
31. Which among the following is not a function of flywheel?
- (A) Absorbs excess kinetic energy during power stroke  
(B) Provides frictional drive surface for clutch  
(C) Varies the torque  
(D) Helps to keep engine speed uniform
32. Aluminized valves should never be ground and must be replaced because :
- (A) Aluminium is a soft metal  
(B) Grinding damages protective coating and make them corrosion prone  
(C) Grinding causes excessive wear  
(D) None of them
33. Which of the following compound is not suitable for use as an antifreeze solution in automobile coolant?
- (A) NaCl solution (B) Ethyl alcohol  
(C) Glycerol (D) Methyl alcohol

34. Calorific value of gasoline is about :
- (A) 35 kJ/kg (B) 35 MJ/kg  
(C) 45 kJ/kg (D) 45 MJ/kg
35. In a diaphragm spring type single plate clutch, the wear of the clutch facing causes the clamping force to :
- (A) Decrease (B) Increase  
(C) Remains constant (D) Becomes infinite
36. Double declutching is required in :
- (A) Constant mesh gear box (B) Sliding mesh gear box  
(C) Synchro mesh gear box (D) All of these
37. The type of joint used to adjust the length of propeller shaft when required is :
- (A) Universal joint (B) Hook's joint  
(C) Slip joint (D) All of these
38. A torsion bar :
- (A) Take braking or driving thrust only (B) Take shear stress only  
(C) Provides damping (D) All of these
39. Example of independent suspension system :
- (A) Wishbone type (B) Vertical guide type  
(C) Trailing link type (D) All of these
40. Tilt of the car wheels from vertical is called :
- (A) Camber (B) Castor  
(C) Toe-in (D) None of these
41. Which of the following statement is not true in the case of four wheel steering?
- (A) Improved steering response and precision  
(B) Larger turning radius  
(C) Superior cornering stability  
(D) High speed straight line stability

42. The term “ply rating” in the case of a tyre means :
- (A) Aspect ratio (B) Actual number of plies  
(C) Recommended inflation pressure (D) Rated strength
43. The trouble caused by eccentricity of wheel and tyre is :
- (A) Wheel wobble (B) Side wear of tyres  
(C) Wheel bounce (D) None of these
44. What is the primary cause of brake fade?
- (A) Overheating of brake components (B) Low brake fluid  
(C) Faulty brake pads (D) Excessive braking force
45. The braking system which controls the braking force to individual wheels at all times depending upon the load carried by each wheel :
- (A) Electric-hydraulic combi brake (B) Brake by wire  
(C) Dynamic braking system (D) None of these
46. Which one of the following is TRUE about Selective catalytic reduction?
- (A) Increase NO<sub>x</sub> emission  
(B) Reductant is typically automotive grade urea  
(C) Catalyst used is Platinum  
(D) Reductant is need not be refilled
47. An undesirable byproduct of combustion that is formed due to high temperature conditions :
- (A) Unburnt hydrocarbons (B) Soot  
(C) Carbon monoxide (D) Oxides of Nitrogen
48. Effect of Exhaust gas recirculation is :
- (A) Reduces engine efficiency  
(B) Decreases hydrocarbon emission  
(C) Increases Nox emission  
(D) Increases engine efficiency



49. The EGR lift sensor is used to sense :
- (A) Oxygen content of the exhaust gas
  - (B) Temperature of exhaust gas
  - (C) Flow rate of exhaust gas
  - (D) Extent to which EGR valve is open
50. The basic function of a three way catalytic converter is :
- (A) It reduces  $N_2$ ,  $H_2O$  and  $CO_2$  emission
  - (B) It burns fuel vapour gases
  - (C) It reduces CO, HC and  $NO_x$  from exhaust gases
  - (D) It burns fuel vapour gases
51. Which one of the following is not correct for the resistance offered by a conductor?
- (A) It varies directly as its length
  - (B) It varies directly as its cross sectional area
  - (C) It varies inversely as its cross sectional area
  - (D) It depends on the nature of material
52. Henry (H) is the SI unit of :
- (A) Capacitance
  - (B) Resistance
  - (C) Inductance
  - (D) Magnetic flux
53. Which one of the following is correct about Lead acid battery?
- (A) Spongy lead on positive plate when fully charged
  - (B) Lead peroxide on positive plate when fully charged
  - (C) Lead sulphate on both plates when fully charged
  - (D) Lead peroxide on both plates when fully discharged
54. Hydrometer directly measures :
- (A) Volume of electrolyte
  - (B) Percentage of electrolyte
  - (C) Density of electrolyte
  - (D) Specific gravity of electrolyte

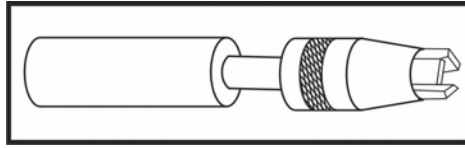
55. The standard electrolyte solution for alkaline batteries is :
- (A) Dilute sulphuric acid
  - (B) Dilute hydrochloric acid
  - (C) Dilute potassium hydroxide
  - (D) Dilute nitric acid
56. \_\_\_\_\_ motor is capable for producing heavy starting torque.
- (A) Synchronous motor
  - (B) DC series motor
  - (C) SC shunt motor
  - (D) Single phase AC motor
57. An electromagnet that translates current flow into mechanical movement is :
- (A) Solenoid
  - (B) Relay
  - (C) Fuse
  - (D) Plunger
58. Which one of the following is the correct statement?
- (A) Both ammeter and voltmeter are connected in series with the circuit
  - (B) Ammeter is connected in series whereas voltmeter is connected in parallel with the circuit
  - (C) Ammeter is connected in parallel whereas voltmeter is connected in series with the circuit
  - (D) Both ammeter and voltmeter are connected in parallel with the circuit
59. Relationship among voltage (V), current (I), and resistance (R) according to Ohm's law :
- (A)  $I = VR$
  - (B)  $R = VI$
  - (C)  $V = I/R$
  - (D)  $V = IR$
60. The working principle of an alternator is :
- (A) Electromagnetic induction
  - (B) Self induction
  - (C) Mutual induction
  - (D) All of these

61. What is the tolerance value of Red color band in resistors?  
(A) 10 (B) 5  
(C) 1 (D) 2
62. Which of the following electronic component can be used as a solid state switch?  
(A) Transistor (B) Resistor  
(C) Two way electric switch (D) Push button switch
63. Choose the correct statement regarding Parallel capacitor circuit :  
(A) Having a lower capacitance than any single one  
(B) Convenient way to increase the total storage of electric charge  
(C) Generally avoided in power circuits  
(D) The voltage drop across each capacitors
64. How did identify the cathode end of diode?  
(A) Marked by a circular band (B) Larger in length  
(C) Larger in diameter (D) Insulated cap on the terminal
65. Which type of sensors whose resistance changes with respected to change in pressure?  
(A) Thermistor (B) Rheostat  
(C) Hall effect sensor (D) Piezo resistive sensor
66. Which of the following is ON-OFF sensor?  
(A) Lamda sensor (B) Switches  
(C) Hall effect sensor (D) Hot film air mass meter
67. Which of the following actuator used where precised movement is required?  
(A) Stepper motor (B) Relay  
(C) Injector (D) Wiper motor
68. Which actuator helps ECU to control engine idling speed?  
(A) TPS (B) IAC  
(C) CKP (D) APP

69. Choose the correct statement regarding NC relay :
- (A) Power circuit opens when control circuit is activated
  - (B) Power circuit closes when control circuit is activated
  - (C) Control circuit opens when power circuit activated
  - (D) Control circuit closes when power circuit activated
70. Which of the following will service as a donor impurity in silicon?
- (A) Arsenic
  - (B) Gallium
  - (C) Germanium
  - (D) Boron
71. Which of the following are the main Principles of Air Conditioning?
- (A) Evaporation and Condensation, Compression and Expansion
  - (B) Evaporation and Heating, Compression and Expansion
  - (C) Evaporation and Condensation, Compression and Heating
  - (D) Evaporation and Heating, Compression and Cooling
72. Which of the following is not the Part of a Basic Air Conditioning System of a Vehicle?
- (A) Magnetic Switch
  - (B) Expansion Valve
  - (C) Magnetic Clutch
  - (D) Blower
73. Which Statement is correct regarding Car AC Compressor?
- (A) Compressor receive high pressure hot Refrigerant
  - (B) Compressor receive low pressure cool Refrigerant
  - (C) Compressor receive high pressure cool Refrigerant
  - (D) Compressor receive low pressure hot Refrigerant
74. What is the function of Expansion valve in Air Conditioning System?
- (A) Permit Liquid Refrigerant to expand to low pressure Vapour
  - (B) Permit Gas Refrigerant to expand to low pressure Gas
  - (C) Permit Gas Refrigerant to expand to high pressure Gas
  - (D) Permit Liquid Refrigerant to expand to high pressure Vapour
75. Boiling Point of R134a Refrigerant is approximately :
- (A) 26.5 Degree Centigrade
  - (B) 101.6 Degree Centigrade
  - (C) -101.6 Degree Centigrade
  - (D) -26.5 Degree Centigrade

76. Compressor of Car AC receives Refrigerant in :
- (A) Liquid State (B) Semi liquid state  
(C) Vapour State (D) Solid State
77. What is the function of Receiver Drier in an Air Conditioning System?
- (A) Allows Only Liquid Refrigerant is passed to compressor  
(B) Allows Only Liquid Refrigerant is passed to Expansion Valve  
(C) Allows Only Liquid Refrigerant is passed to Condensor  
(D) Allows Liquid Refrigerant is passed to Atmosphere
78. Which Flow Mode of AC is suitable when outside is dusty and contaminated?
- (A) Fresh Flow Mode (B) Recirculation Flow Mode  
(C) Blower Alone ON mode (D) None of these
79. Which is not correct for Ambient Air Temperature Sensor?
- (A) It is a Negative Temperature Coefficient type Sensor  
(B) Located behind the Grill or Front Bumper  
(C) It monitors the Air Temperature outside the Vehicle  
(D) It monitors the Air Temperature of Passenger Compartment
80. What is Evaporative Temperature Sensor used in car AC?
- (A) It detects the temperature of AC Evaporator and Condensor  
(B) It detects and monitors the Temperature inside the Car  
(C) It detects and monitors the Temperature of Atmosphere  
(D) It detects and monitors the Temperature of AC Evaporator
81. Which one is the indirect measuring instrument?
- (A) Steel rule (B) Inside Caliper  
(C) Outside micrometer (D) Inside Micrometer
82. Which precision instrument used for taking external, internal and depth measurement?
- (A) Vernier caliper (B) Depth micrometer  
(C) Inside micrometer (D) Outside micrometer

83. What is the name of the vice?

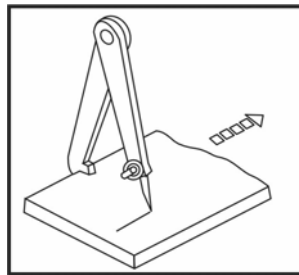


- (A) Pipe vice
- (B) Pin vice
- (C) Tool maker's vice
- (D) Hand vice

84. Which is used for making and setting of work?

- (A) Surface plate
- (B) Bench vice
- (C) Marking table
- (D) 'V' Block

85. What is the name of caliper?



- (A) Outside Caliper
- (B) Firm joint Caliper
- (C) Heal type jenny Caliper
- (D) Spring joint Caliper

86. The range of the micrometer is 75 to 100 mm. The barrel reading is 15.50 mm and the 10<sup>th</sup> thimble graduation coincides with the barrel datum line. The reading is :

- (A) 90.60 mm
- (B) 90.06 mm
- (C) 90.50 mm
- (D) 90.40 mm

87. The difference between 1 M.S.D and 1 V.S.D in Vernier Caliper is :

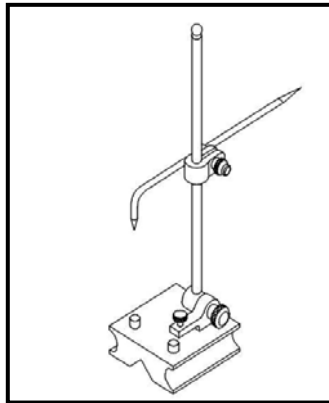
- (A) 0.02 mm
- (B) 1.00 mm
- (C) 0.2 mm
- (D) 0.01 mm

88. The minimum measurement that can be read with the help of a steel rule is :

- (A) 0.01 mm
- (B) 0.02 mm
- (C) 0.50 mm
- (D) 0.05 mm

89. The tool, which is used for laying out large circles is :
- (A) Trammel (B) Divider  
(C) Jenny Caliper (D) Scriber

90. What is the name of marking instrument?



- (A) Universal surface gauge (B) Bevel gauge  
(C) Bevel protractor (D) Universal bevel gauge
91. Which part of electronic power steering reverts back to manual steering in case of failure in power steering?
- (A) Solenoid valve (B) Phase compensator  
(C) Fail safe relay (D) Rotation sensor
92. In TPMS, where the tyre pressure sensor secured in the wheel assembly?
- (A) Secured in the wheel hub (B) Secured in tyre outer edges  
(C) Bolted to the rim centre (D) Bolted to metal valve
93. Which device in electronic power steering converts the steering torque input and its direction in to voltage signals?
- (A) Rotation sensor (B) Torque sensor  
(C) Hall effect sensor (D) Phase compensator
94. What is the function of EBD (Electronic Brake – Force Distribution) in anti lock braking system?
- (A) It control the slip of the rear wheel  
(B) It controls the slip of the front wheel  
(C) It increase brake pressure to the rear wheel  
(D) It improve directional stability of vehicle

95. What is the purpose of 'G' sensor in ABS?
- (A) Increase pressure inside wheel cylinder
  - (B) Reduce pressure at wheel cylinder
  - (C) Measuring deceleration rate of vehicle
  - (D) Detect wheel lock up condition
96. Which sensor used for safer parking of vehicle?
- (A) Infrared sensor
  - (B) Proximity sensor
  - (C) Crash sensor
  - (D) Air bag sensor
97. What is the expansion of ICAT in the vehicle safety system?
- (A) Intelligent Computer Advanced Technology
  - (B) Indian Computer Advanced Technology
  - (C) Intelligent Computerized Anti Theft system
  - (D) Indian Compact Anti Theft system
98. What is the advantage of TCS/ELSD brake circuit of wheel?
- (A) Reduce the pressure at wheel cylinder
  - (B) Reduce fluid pressure
  - (C) Avoid wheel lockup by releasing pressure
  - (D) Automatic adjustment of engine torque to the grip rates
99. How to confirm the satisfactory function of air bag system?
- (A) Air bag warning light come on during starting and stopping
  - (B) Warning light on with engine running
  - (C) Warning light on and flash few times and go out during starting
  - (D) Beep sound on during starting
100. Which system determines the vehicles location by forming a triangle with a group of four or more satellites?
- (A) Trilateration
  - (B) Reflective displays
  - (C) Telematics
  - (D) Triangle Multiplexing



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