

**PSC Junior Instructor - Mechanic  
Motor Vehicle - Industrial Training  
Examination  
Previous Year Question Paper**

***Exam Name: Junior Instructor - Mechanic  
Motor Vehicle - Industrial Training***

***Date of Test : 28.10.2015***

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***Medium of Questions: English***



202/2015

1. Which one of the following is an indirect measuring tool ?  
(A) Inside caliper (B) Vernier caliper  
(C) Bevel protractor (D) Inside micrometer
2. In a metric micrometer, a complete revolution of thimble advances :  
(A) 0.01 mm (B) 0.25 mm (C) 0.50 mm (D) 1.00 mm
3. The angle which is less than 90 degree is called as :  
(A) Obtuse angle (B) Acute angle  
(C) Right angle (D) None of the above
4. Which one of the following designation does **not** denote the grade of a file ?  
(A) Bastard (B) First cut (C) Second cut (D) Smooth
5. The tool used for refitting piston rings on piston is :  
(A) Piston ring expander (B) Piston ring compressor  
(C) Circlip plier (D) Valve spring compressor
6. In which nut having an internal groove cut, in which a fiber or nylon ring inserted ?  
(A) Thumb nut  
(B) Castle nut  
(C) Cape nut  
(D) Simmonds lock nut
7. The tool used to measure the clearance between two surfaces is called :  
(A) Fillet gauge (B) Snap gauge (C) Feeler gauge (D) Limit gauge
8. Tap wrench is a tool used to make :  
(A) Key ways (B) Oil holes (C) External threads (D) Internal threads

9. A metal can be drawn in to wires without rupture. This property of metal is known as :  
(A) Malleability (B) Ductility (C) Machinability (D) Toughness
10. The tool used to measure the thickness, of sheet is called :  
(A) Screw pitch gauge (B) Ring gauge  
(C) Feeler gauge (D) Wire gauge
11. Wear on one side of tyre is due to :  
(A) Excessive camber (B) Excessive caster  
(C) Under inflation (D) Over inflation
12. King pin is locked in the beam by a :  
(A) Stub axle (B) Cotter pin  
(C) Drop arm (D) Split pin
13. Tie rod ends have the following threads :  
(A) Left hand (B) Right hand (C) Either (A) or (B) (D) Both (A) and (B)
14. Which one of the following is **not** considered for calculating the unsprung weight ?  
(A) Steering knuckle (B) Brakes (C) Axles (D) Chassis frame
15. In an integral power steering system, fluid flow is controlled by :  
(A) Plunger (B) Check valve  
(C) Spool valve (D) Hydraulic pump
16. Which one of the following is **not** a part of master cylinder ?  
(A) Piston (B) Push rod (C) Check valve (D) Piston rings
17. In air brakes, what is the position of valves in brake valve, when brake pedal is Released ?  
(A) Both inlet and outlet closed (B) Inlet closed and outlet opened  
(C) Inlet opened and outlet closed (D) Both inlet and outlet remains opened

18. The procedure of removing air out of the braking system is known as :  
(A) Brake adjusting (B) Brake dragging  
(C) Brake bleeding (D) Brake compensating
19. Hydraulic brakes works on the principle of :  
(A) Pascal's law (B) Boyle's law (C) Charl's law (D) Newton's law
20. The rocking chair action of vehicle during running is known as :  
(A) Rolling (B) Pitching (C) Bouncing (D) Wobbling
21. What type of clutch is used in two wheelers ?  
(A) Multi plate clutch (B) Cone clutch  
(C) Single plate clutch (D) Diaphragm clutch
22. In Hotchkiss drive, rear end driving torque is taken up by :  
(A) Rear axle housing (B) Rear leaf spring  
(C) Shock absorber (D) Engine mounting
23. The main function of a universal joint is to :  
(A) Transfer the engine power in a straight line only  
(B) Accommodate change in length of drive shaft  
(C) Allow variation of angle between main shaft and drive shaft  
(D) All of the above
24. The components of an automobile transmission system that facilitate the drive to turn at right angle are :  
(A) Planet pinion and sun gear (B) Bevel pinion and sun gear  
(C) Crown wheel and sun gear (D) Bevel pinion and crown wheel
25. Transfer case is used for :  
(A) Rear wheel drive vehicles (B) Front wheel drive vehicles  
(C) Four wheel drive vehicles (D) Two wheel drive vehicles

26. The driven member of torque converter is known as :  
(A) Turbine (B) Stator (C) Impeller (D) Flywheel
27. Double de-clutching is used on :  
(A) Sliding mesh gear box (B) Synchromesh gear box  
(C) Constant mesh gear box (D) Epicyclic gear box
28. In a differential action which gear does **not** revolve in a straight drive ?  
(A) Sun gear (B) Planetary gear (C) Crown wheel (D) Pinion
29. The function of gear box is to :  
(A) Increase speed (B) Increase torque (C) Provide neutral (D) All of the above
30. Which type of gear permits lower position of propeller shaft ?  
(A) Herring bone (B) Hypoid (C) Bevel (D) Spiral
31. The head light of a vehicle is connected with the battery in :  
(A) Parallel (B) Series (C) Compound (D) Either (A) or (B)
32. The state of charge of battery is checked by :  
(A) Cell tester (B) Hydrometer (C) Multimeter (D) All of the above
33. If three resistances 6 ohm, 4 ohm and 3 ohm are connected in parallel, what will be the total resistance ?  
(A) 13 Ohm (B) 1.3 Ohm (C) 6.5 Ohm (D) 26 Ohm
34. Which one of the shell around the nucleus of an atom is mentioned by the letter "M"?  
(A) First (B) Second (C) Third (D) Fourth

35. One reason why an alternator produces a higher output than a dynamo is because, the alternator :
- (A) Is driven fast (B) Has a commutator  
(C) Generates direct current (D) Always uses a negative earth
36. The output of an alternator is converted by :
- (A) Voltage regulator (B) Current regulator  
(C) Diod rectifier (D) Cut out relay
37. Inertia type starting motor drive is commonly used on :
- (A) Cars (B) Heavy vehicles  
(C) Commercial vehicles (D) None of the above
38. The cable colour code of head lamp circuit is :
- (A) Red (B) Brown (C) Green (D) Blue
39. A semi conductor material have, how much electrons in its outermost orbit ?
- (A) Two (B) Four (C) One (D) Three
40. The central section of a transistor is called :
- (A) Emitter (B) Base (C) Collector (D) Hole
41. If air fuel mixture is compressed in a cylinder :
- (A) Its volume reduces (B) Its pressure will rise  
(C) Its temperature will rise (D) All of the above
42. An engine has a clearance volume of  $100 \text{ cm}^3$  and a swept volume of  $900 \text{ cm}^3$ . The compression ratio is :
- (A) 10 : 1 (B) 8 : 1 (C) 11 : 1 (D) 9 : 1
43. Speed of a four stroke engine is 1000 rpm. The number of power strokes per minute will be :
- (A) 4000 (B) 500 (C) 400 (D) 1000

44. During which one of the following strokes, the pressure in the engine cylinder become less than the atmospheric pressure ?  
(A) Suction (B) Compression (C) Power (D) Exhaust
45. Diesel cycle engines are also known as :  
(A) Constant volume cycle engines (B) Constant vacuum cycle engines  
(C) Constant pressure cycle engines (D) Dual cycle engines
46. 1 kilowatt is equal to :  
(A) 746 HP (B) 4500 HP (C) 1.3596 HP (D) 735.5 HP
47. Engine BHP is measured by :  
(A) Barometer (B) Hydrometer (C) Odometer (D) Dynamometer
48. Turbo charger is used for diesel engines to increase :  
(A) Mechanical efficiency (B) Volumetric efficiency  
(C) Thermal efficiency (D) All of the above
49. During the upward stroke of a two stroke petrol engine, which of the following events takes place ?  
(A) Compression and suction (B) Compression and exhaust  
(C) Compression and power (D) Compression and transfer
50. In the following statements, which is suitable for a petrol engine ?  
(A) High initial cost (B) High maintenance cost  
(C) High running cost (D) All of the above
51. A four cylinder four stroke petrol engine have :  
(A) Two valves (B) Four valves  
(C) Eight valves (D) Sixteen valves
52. The purpose of piston ring is to control :  
(A) Compression pressure (B) Oil consumption  
(C) Cylinder wall lubrication (D) All of the above
53. The engine valves are closed by :  
(A) Cam shaft (B) Valve spring (C) Rocker arm (D) Push rod

54. The function of lubrication system is to :  
(A) Provide cooling effect (B) Provide sealing effect  
(C) Reduce wear (D) All of the above
55. Which one of the following pump is **not** used for engine lubrication ?  
(A) Gear type (B) Vane type (C) Impeller type (D) Plunger type
56. Feed pumps in diesel engines are generally mounted in between :  
(A) Tank and filter (B) FIP and Filter  
(C) FIP and Injector (D) Injector and manifold
57. Hand priming device in a diesel engine is usefull, when the engine is at :  
(A) Full load (B) Rest (C) Idling speed (D) Full speed
58. In a positive crank case ventilation system, the blow by gas drawn from the crank is fed to the :  
(A) Combustion chamber (B) Inlet manifold  
(C) Exhaust manifold (D) A vent opened to the atmosphere
59. The total swept volume in all cylinders of an engine is called :  
(A) Volumetric efficiency (B) Overall efficiency  
(C) Compression ratio (D) Cubic capacity
60. The material used for cam shaft is :  
(A) Alloy steel (B) High carbon steel  
(C) Cast iron (D) Mild steel
61. Advancing of valve opening is called :  
(A) Valve overlap (B) Valve lag (C) Valve lead (D) Valve delay

62. Octane number of petrol is generally ranges from :  
(A) 80 - 90 (B) 40 - 60 (C) 60 - 70 (D) 100 - 110
63. Loud popping in carburetor is due to :  
(A) Incorrect air - fuel ratio (B) Blocked air cleaner  
(C) Back firing (D) Loose mounting of carburetor
64. In which of the following engine have more thermal efficiency ?  
(A) Petrol (B) Diesel (C) Gas (D) Electric
65. From where, the air and fuel is mixed in a petrol engine ?  
(A) Inlet manifold (B) Combustion chamber  
(C) Air cleaner (D) Carburetor
66. The process of adjusting the quantity of fuel delivered by the fuel injection pump is :  
(A) Phasing (B) Calibration (C) Timing (D) Bleeding
67. The type of carburetor used in two wheeler vehicle is :  
(A) SU (B) Solex (C) Carter (D) Zenith
68. Air cleaner is used for :  
(A) Cleaning the incoming air for combustion  
(B) Reducing the noise of incoming air  
(C) To arrest the flame during engine back fire  
(D) All of the above
69. The function of ignition coil is :  
(A) To make and break the primary circuit  
(B) To step down the battery voltage  
(C) To step up the battery voltage  
(D) All of the above

70. Spark plug gap ranges from :  
(A) 5 mm - 10 mm (B) 0.5 mm - 1 mm (C) 1 mm - 5 mm (D) 0.5 mm - 3.5 mm
71. MPFI Engines have MAP sensor. What is meant by MAP ?  
(A) Manifold Absolute Pressure (B) Maximum Air Pressure  
(C) Manifold Air Pressure (D) Mean Atmospheric Pressure
72. Turbocharger is worked by the :  
(A) Engine crank shaft (B) Battery  
(C) Exhaust gas (D) Incoming air
73. Which one of the following is a pollutant substance contained in the engine exhaust gas ?  
(A) Hydrocarbon (B) Carbon monoxide  
(C) Oxides of nitrogen (D) All of the above
74. EGR System stands for :  
(A) Exhaust Gas Recovery System  
(B) Exhaust Gas Removing System  
(C) Exhaust Gas Recirculation System  
(D) Exhaust Gas Reducing System
75. ABS System controls :  
(A) Speed of vehicle (B) Brake efficiency (C) Skidding (D) All of the above
76. Multiple valve technology means :  
(A) Enlarging the size of valves (B) Providing more number of valves  
(C) Improving the quality of valves (D) Increasing the speed of valve operation
77. Catalytic converter have a coating of :  
(A) Platinum (B) Palladium  
(C) Rhodium (D) Any of the above

78. Duration of the vehicle permit is :  
(A) 5 years (B) 3 years (C) 1 year (D) 20 years
79. Which one of the following traffic sign is strictly compulsory for a driver ?  
(A) Mandatory signs (B) Informatory signs  
(C) Cautionary signs (D) All of the above
80. A driver must stop the vehicle, when :  
(A) Required to do so by any police officer  
(B) Involved in an accident  
(C) Any pedestrian crossing the zebra line  
(D) All the above circumstances
81. The Preamble of Indian Constitution is based on the Objectives Resolution drafted by \_\_\_\_\_ and introduced in the first session of Constituent Assembly.  
(A) K.M. Munshi (B) B.R. Ambedkar  
(C) Jawaharlal Nehru (D) Sarojini Naidu
82. India adopted the concept of constitutional Amendment from \_\_\_\_\_.  
(A) South Africa (B) Great Britain (C) Ireland (D) U.S.A.
83. Who acted as representative of President in Union territories ?  
(A) Attorney General (B) Control and Auditor General  
(C) Vice-President (D) Lieutenant-Governor
84. The Eighth schedule of Indian constitution deals with \_\_\_\_\_.  
(A) Land reforms (B) Languages  
(C) Panchayati raj (D) Emergency

85. Who among the following was a member of Indian constituent assembly formed in 1946 ?  
(A) Susheela Gopalan (B) Annie Mascreeen  
(C) Lakshmi N. Menon (D) A.V. Kuttiimalu Amma
86. Who was the head of the commission appointed in 1983 to examine centre-state relations ?  
(A) Rajinder Singh Sarkaria (B) Balvanth Rai Mehta  
(C) Dinesh Goswami (D) Motilal Vora
87. Which day is celebrated as World Blood donation day ?  
(A) January 16 (B) June 14 (C) October 21 (D) November 8
88. Political parties were brought under Right to Information Act in the year :  
(A) 2012 (B) 2013 (C) 2014 (D) 2015
89. India's first fast tract court for dealing with atrocities against women and children is at :  
(A) Malda (B) Patna (C) Pune (D) Kochi
90. Wild life protection act was passed in the year \_\_\_\_\_.  
(A) 1963 (B) 1970 (C) 1972 (D) 1980
91. The English newspaper "Pro-India" was started by \_\_\_\_\_.  
(A) Chettoor Sankaran Nair (B) Chembakaraman Pillai  
(C) Nilakanda Brahmachari (D) V.O. Chidambaram pillai
92. Who founded Ramakrishna Advaita Ashram at Kalady ?  
(A) Swami Agamananda (B) Brahmananda Swami Sivayogi  
(C) Vaikunda Swamikal (D) Vagbhadananda

93. The newspaper "Kerala Kaumudi" was started by \_\_\_\_\_ to further the ideals of Sree Narayana Guru :
- (A) K. Ayyappan (B) T.K. Madhavan  
(C) Kishnaswami Aiyer (D) C.V. Kunjuraman
94. The title "Vayalar Stalin" is associated with :
- (A) C.K. Kumara Panikkar (B) R. Shanker  
(C) A.P. Udayabhanu (D) T.M. Varghese
95. Who was the author of the drama "Pattabakki" ?
- (A) C.V. Raman Pillai (B) K. Damodaran  
(C) M.P. Bhattathiripad (D) E.V. Krishnapillai
96. Who among the following was nominated to Cochin legislative assembly to advice about the Namboodiri Bill ?
- (A) Parvathy Nenmeni Mangalam (B) Arya Pallam  
(C) Eshwari Ammal (D) Kaumudi Teacher
97. Who is known as the father of malayalam typography and printing ?
- (A) Herman Gundert (B) Benjamin Bailey  
(C) Devj Bhimji (D) Kandathil Varghese Mappila
98. Who is the author of the work "Pracheenamalayalam" ?
- (A) Ayyankali (B) C. Krishnan  
(C) Poikayl Yohannan (D) Chattambi swamikal
99. At \_\_\_\_\_ Sree Narayana Guru consecrated a temple and installed a stone containing the words "Truth, Duty, Kindness and Peace".
- (A) Kalavankode (B) Aruvippuram  
(C) Murakumpuza (D) Karamukku
100. Who was the main leader of the Suchindram Sathyagraha ?
- (A) A.K. Gopalan (B) Dr. M.E. Naidu  
(C) K. Kelappan (D) C. Rajagopalachari

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