

**PSC Motor Mechanic/ Store  
Assistant - Ground Water  
Examination  
Previous Year Question Paper**

***Exam Name: Motor Mechanic/ Store Assistant -  
Ground Water***

***Date of Test : 17.12.2015***

***Question Paper Code: 232/2015***

***Medium of Questions: English***



**232/2015**

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. Before a mechanic get under a vehicle he should make sure that :  
(A) The tyres are inflated (B) He use a creeper  
(C) The jack handle is down (D) The vehicle is on safety stands
2. In automobile servicing concept what is meant by 'Tear down'?  
(A) Adjusting (B) Disassembling  
(C) Reassembling (D) Machining
3. Which is most suitable to check spark plug gap?  
(A) Feeler gauges (B) Micrometer  
(C) Wire gauges (D) Vernier caliper
4. The reading of a metric micrometer is in :  
(A) Centimetre (B) Thousands of an inch  
(C) Thousands of millimetre (D) Metre
5. To measure the taperness of a cylinder a ————— is used.  
(A) Dial indicator (B) Vernier caliper  
(C) Depth gauge (D) Micrometer
6. Splines and keys in mechanical assemblies :  
(A) Fasten studs into place (B) Locks nuts to bolts  
(C) Locks gears to shafts (D) Used as set screws
7. Castle nuts are normally used with :  
(A) Snap rings (B) Cotter pins  
(C) Bolt heads (D) Lock washers
8. Gaskets are used to :  
(A) Prevent any leakage of fluid (B) Seals out pressure  
(C) Takes up space as shims (D) Any of the above



9. Taps are used to :
- (A) Cut internal threads (B) Cut external threads  
(C) Enlarge a hole (D) Both (A) and (B)
10. A 'Clutch spring compressor' compresses \_\_\_\_\_ of the clutch while dismantling.
- (A) Cushioning springs (B) Thrust springs  
(C) Anti rattling springs (D) Torsional springs
11. As piston moves towards TDC in compression stroke :
- (A) The mixture gets hotter  
(B) Even distribution of mixture happens  
(C) Pressure rise occurs  
(D) All of the above
12. The stroke in which both the valves are closed is :
- (A) Suction (B) Compression  
(C) Expansion (D) Both (B) and (C)
13. To further smoothen out the flow of power engines have:
- (A) Counter weights (B) Fly wheels  
(C) Crank pins (D) Crank webs
14. To convert the reciprocating motion to rotary motion the engines have:
- (A) Cam shaft and crank shaft  
(B) Pistons and connecting rods  
(C) Connecting rods and crank shaft  
(D) Cam shaft and rocker arms
15. How many times in minute the inlet valve of a four stroke engine working at 1000 RPM open and close?
- (A) 500 (B) 1000  
(C) 1500 (D) 2000



16. Valve rotators are used for :  
(A) Rotating the valves on its own axis (B) Reducing the warping of valves  
(C) Even wear distribution of valves (D) All of the above
17. VTEC stands for :  
(A) Variable valve Timing Electronic Cam shaft  
(B) Variable valve Timing and lift Electronic control  
(C) Valve Timing Electrical Cam shaft  
(D) None of the above
18. Most commonly used valve actuating mechanism in modern cars is :  
(A) T-head (B) I-head  
(C) L-head (D) F-head
19. The carbon deposits on the cylinder head is removed with :  
(A) Scraper brush (B) Water jet  
(C) Soap solution (D) Kerosene
20. In a single cylinder two stroke engine running at 2000 RPM the number of power strokes per minute is :  
(A) 1000 (B) 4000  
(C) 2000 (D) none
21. In an Otto cycle engine, the operation sequence is :  
(A) Compression, exhaust, power (B) Power, induction, exhaust  
(C) Compression, power, exhaust (D) Compression, power, induction
22. The factor for ignition in diesel engines is :  
(A) Pressure of injection (B) High compression ratio  
(C) Abundance of air (D) All of the above
23. In a two stroke engine at the time of spark occurs :  
(A) Transfer port has just opened  
(B) Fresh gas is being compressed  
(C) Fresh charge is being transferred to inlet  
(D) Any of the above



24. Which of the following is a rich air fuel ratio?
- (A) 9:1 (B) 11:1  
(C) 13:1 (D) 15:1
25. The percentage of combustion heat, available at crank shaft for useful work output is :
- (A) 35% (B) 55%  
(C) 60% (D) 20%
26. In an engine having swirl combustion chamber :
- (A) More air fuel mixture enters (B) Improved scavenging take place  
(C) Improved combustion take place (D) Burned gas has no back pressure
27. The main purpose of piston pin offset is to :
- (A) Perfectly balance the piston during power stroke  
(B) Prevent piston slip  
(C) Centralise the piston  
(D) Reduce piston slap
28. Some automobile engines have glow plugs to :
- (A) Warn the driver about engine overheat  
(B) Preheat the fuel for easier starting  
(C) Preheat the combustion chamber  
(D) Warm the passenger area
29. The upper and lower ends of the combustion chamber is formed by :
- (A) Piston and cylinder block (B) Cylinder walls and piston  
(C) Piston rings and cylinder head (D) Cylinder head and piston
30. Piston rings are provided to:
- (A) Completely seal the combustion gas  
(B) Hold the piston concentric to cylinder walls  
(C) Hold a fine oil film on cylinder walls  
(D) Both (A) and (C)



31. Thermostat valve helps the engine to :
- (A) Keep the oil temperature at operating values
  - (B) Keep the coolant temperature at operating values
  - (C) Prevents the engine from overheating
  - (D) Both (B) and (C)
32. In a four stroke engine the cam shaft turns at :
- (A) Same speed as the crank shaft
  - (B) Double the speed as the crank shaft
  - (C) Half the speed of the crank shaft
  - (D) One fourth the speed of the crank shaft
33. Mechanic X says that all OHC engines have rocker arms. Mechanic Y says that some use bucket tappets and no rocker arms. Who is correct?
- (A) Mechanic X
  - (B) Mechanic Y
  - (C) Both X and Y
  - (D) Neither X nor Y
34. Valve overlap occurs at :
- (A) the end of exhaust stroke
  - (B) the beginning of power stroke
  - (C) the beginning of compression stroke
  - (D) the end of power stroke
35. The rate at which work is done, is measured in terms of :
- (A) Energy
  - (B) Torque
  - (C) Inertia
  - (D) Power
36. The volume of air contained above the piston when the piston is at TDC is :
- (A) Clearance volume
  - (B) CC
  - (C) Swept volume
  - (D) Stroke volume
37. The condition of exploding the end charge before the completion of normal combustion is :
- (A) Pre-ignition
  - (B) Rumble
  - (C) Detonation
  - (D) Stalling
38. Low Cetane fuel implies that :
- (A) It takes longer time to ignite
  - (B) It takes lesser time to ignite
  - (C) Ignites as soon as it enters the cylinder
  - (D) Both (B) and (C)



39. Mechanical fuel pumps are operated by :  
(A) Cam in the cam shaft (B) Eccentric in the crank shaft  
(C) Skew gear in the cam shaft (D) Eccentric in the cam shaft
40. Taper needle jet is found in :  
(A) Solex carburettor (B) SU carburettor  
(C) Zenith carburettor (D) Carter carburettor
41. Generally turbo charger is operated by :  
(A) A belt driven by the engine crank shaft  
(B) A gear attached to the cam shaft  
(C) A chain and sprocket drive  
(D) Exhaust gas
42. Qualitative governing is best suited for :  
(A) High speed engines (B) Slow speed engines  
(C) Diesel engines (D) Petrol engines
43. Growler is associated with :  
(A) Battery (B) Armature  
(C) CB point (D) FIP
44. High compression ratio result in :  
(A) Increased  $\text{NO}_x$  emission (B) More soot in exhaust  
(C) Reduced HC and CO emission (D) All of the above
45. PCV valve is located between :  
(A) Crank case and inlet manifold (B) Crank case and carburettor  
(C) Air cleaner and crank case (D) Air cleaner and carburettor
46. CO in the exhaust of a vehicle should not be more than :  
(A) 0.5% (B) 1%  
(C) 1.5% (D) 2%
47. The temperature below which the oil will not flow is :  
(A) Fire point (B) Flash point  
(C) Pour point (D) Flow point



48. Transfer case is a type of \_\_\_\_\_ in four wheel drive vehicles.
- (A) Crank case (B) Gear Box  
(C) Transmission shaft (D) Differential
49. Gear Clash while shifting is due to :
- (A) Incorrect clutch adjustment (B) Damaged synchronizer unit  
(C) Low level gear oil (D) Any of the above
50. In case of front engine rear wheel drive cars the drive shaft has :
- (A) Minimum one universal joint (B) Maximum two universal joint  
(C) Minimum two universal joint (D) Two slip joints
51. A slip joint permits changes in :
- (A) Wheel base (B) Wheel track  
(C) Wheel alignment (D) None
52. Alternator produces electricity in its :
- (A) Stator windings (B) Rotor field windings  
(C) Commutator (D) Regulator
53. While trying to start an engine it cranks slowly but doesn't start .It may be due to :
- (A) Low temperature (B) Run down battery  
(C) Damaged fuel system (D) Any of the above
54. Approximate starter pinion-ring gear, gear ratio is :
- (A) 5:1 (B) 15:1  
(C) 25:1 (D) 30:1
55. When it is needed to top up the lead acid battery frequently, it is due to :
- (A) Sulfation (B) Overloading  
(C) Overcharging (D) Long standing period
56. Hydrometer is device used to check :
- (A) Voltage of a cell (B) Specific gravity of acid  
(C) Voltage of a battery (D) Temperature of electrolyte



57. In hydraulic system Brake binding is due to :  
(A) Incorrect free pedal play adjustment (B) Blocked by pass port  
(C) Blocked air vent in master cylinder (D) Any of the above
58. Double de-clutching is associated with :  
(A) Constant mesh gear box (B) Synchromesh gear box  
(C) Hydraulic clutch (D) Magnetic clutch
59. Gear clash during shifting may be caused by any one of the following except :  
(A) Defective synchronizer (B) Incorrect pedal play  
(C) Too low idle speed (D) Unadjusted shift mechanism
60. How many synchronizer units are there in a three speed transmission?  
(A) One (B) Two  
(C) Three (D) Four
61. How many gears are there in the main shaft of a four speed transmission?  
(A) Six (B) Five  
(C) Four (D) Three
62. Pick the odd one out :  
(A) Half shaft (B) Clutch shaft  
(C) Main shaft (D) Lay shaft
63. A humming noise from the under body of a rear wheel drive vehicle is due to :  
(A) Bend propeller shaft (B) Incorrect differential meshing  
(C) Faulty gear box (D) Binding brake
64. The type of front axle in which the king pin is usually fixed in the stub axle forging and its ends turn in the forked end of the axle beam is :  
(A) Lemoine (B) Inverted lemoine  
(C) Reversed elliot (D) Elliot
65. The tilt of the front wheels from vertical is called :  
(A) Caster (B) Camber  
(C) King Pin Inclination (D) Toe in



66. To reduce the vibration and for stability of a vehicle :
- (A) Higher unsprung weight is desired
  - (B) Suspension spring of high frequency can be used
  - (C) Lower unsprung weight is desired
  - (D) Lower body weight is desired
67. Stroke length is equal to :
- (A) Double the crank throw
  - (B) Same as the crank throw
  - (C) Half of crank throw
  - (D) Three times the crank throw
68. Which is not true with respect to Disc brakes?
- (A) Uniform wear
  - (B) Easy to service
  - (C) High initial cost
  - (D) Concealed frictional surface
69. Generally five wheel tyre rotation starts from which side wheel?
- (A) Front right
  - (B) Front left
  - (C) Rear left
  - (D) Rear right
70. Which of the following axle shaft has to take full load?
- (A) Three quarter floating
  - (B) Full floating
  - (C) Semi floating
  - (D) Both (A) and (B)
71. Aspect ratio of tyre is its :
- (A) Section width/Section height
  - (B) Section height/Section width
  - (C) Total width/Total height
  - (D) Rim diameter / Tyre diameter
72. In a tyre it is designated as 'P200/75 R16'. What is the digit 200?
- (A) Section width
  - (B) Section height
  - (C) Rim diameter
  - (D) Aspect ratio
73. What is the symptom of atmospheric air enter the water cooling system of a multi cylinder diesel engine?
- (A) Overheating
  - (B) Coolant become greenish
  - (C) Coolant become reddish
  - (D) Coolant become viscous



74. What is the CC value of new TATA Nano Gen X Easy shift car?  
(A) 424 (B) 524  
(C) 624 (D) 724
75. The type of body movement of a vehicle in which the vehicle turn on its own longitudinal axis is :  
(A) Pitching (B) Bouncing  
(C) Yawing (D) Rolling
76. Which gear will not revolve when the vehicle is moving on straight path?  
(A) Planetary gear (B) Sun gear  
(C) Crown wheel (D) Pinion
77. The rear axle thrust acting on rear axle casing is transferred to frame by :  
(A) Panhard rods (B) Radius rods  
(C) Tie rods (D) Torque tubes
78. Compared with spiral bevel gear, a hypoid gear has the advantage of :  
(A) higher efficiency  
(B) weaker bearings can be used  
(C) higher or lower propeller shaft can be used  
(D) All of the above
79. The pollutant that forms at higher combustion temperatures is :  
(A) CO (B) HC  
(C) NO<sub>x</sub> (D) H<sub>2</sub>O
80. Variable steering gear ratio can be achieved in the case of :  
(A) Worm and sector (B) Worm and nut  
(C) Rack and pinion (D) Worm and Roller
81. Who was the first recipient of Ezhutachan Puraskaram?  
(A) Takazhi Sivasankaran Pillai (B) O.N.V. Kurup  
(C) M.T. Vasudevan Nair (D) Sooranad Kunjan Pillai
82. The last Asian games was held in :  
(A) South Korea (B) China  
(C) North Korea (D) Japan



83. Name the organisation founded by Pandit Karuppan :
- (A) Hindu Dharma Paripalana Sabha (B) Kalyana Dayani Sabha  
(C) Yogakshema Sabha (D) Dharma Paripalana Sabha
84. The first woman President of Indian National Congress :
- (A) Sarojini Naidu (B) Annie Besant  
(C) Vijayalakshmi Pandit (D) Kasturba Gandhi
85. Who was the Prime Minister of India, when Panchasheel was adopted?
- (A) Lal Bahadur Shastri (B) Moraji Desai  
(C) Jawaharlal Nehru (D) Indira Gandhi
86. Swarnajayant, Gram Swarozgar Yojana was launched in :
- (A) 1990 (B) 1999  
(C) 2003 (D) 2008
87. Ranajith Singh Gold cup is associated with :
- (A) Hockey (B) Football  
(C) Cricket (D) Tennis
88. Who won the Nobel prize for literature in 2014?
- (A) Eric Betzig (B) Rauf Mamedeo  
(C) Eliud Kipchage (D) Patrick Modiano
89. The headquarters of Kerala Lalita Kala Academy is at :
- (A) Thrissur (B) Kochi  
(C) Thiruvananthapuram (D) Kozhikode
90. The palace at Mattanchery was built by :
- (A) British (B) Dutch  
(C) Zamorins (D) Portuguese
91. Whose birthday is celebrated as National Youth Day?
- (A) Bhagat Singh (B) B.R. Ambedkar  
(C) Swami Vivekananda (D) Rajeev Gandhi
92. McMohan line is the demarcation line between India and :
- (A) China (B) Pakistan  
(C) Nepal (D) Burma



93. The famous Ajanta-Ellora is situated in :  
(A) Madhya Pradesh (B) Rajasthan  
(C) Maharashtra (D) Delhi
94. Name the newspaper founded by Vakkom Abdul Khadar Maulavi :  
(A) Swadesabhimani (B) Chandrika  
(C) Malayala Manorama (D) Deepika
95. 'Odayilninnu' is a novel written by :  
(A) P.C. Kuttikrishnan (B) S.K.Pottekkad  
(C) O.V. Vijayan (D) Kesavadev
96. Where did the Jallianwala Bagh Massacre occur?  
(A) Jalandhar (B) Delhi  
(C) Amritsar (D) Ludhiana
97. Who was the first secretary of SNDP?  
(A) Sree Narayana Guru (B) Kumaranasan  
(C) Dr. Palpu (D) C.Govindan
98. Who received the Dada Sahib Phalke award in 2013?  
(A) Syam Benegal (B) B.R. Chopra  
(C) Gulzar (D) Gireesh Karnad
99. 'Pracheena Malayalam' was written by :  
(A) Ezhutachan (B) Vaikunda Swamikal  
(C) Herman Gundert (D) Chattampi Swamikal
100. Who appoints the chairman of UPSC?  
(A) The Prime Minister of India (B) The President of India  
(C) The Chief Justice of India (D) The Speaker of Lok Sabha