

Sem VIII / CBSAS/AUTO / (3 Hours)  
VM/M-J-17

[Total Marks: 80]

24/05/2017

- N.B: (1) Question no 1 is compulsory.  
(2) Attempt any THREE out of remaining FIVE questions.  
(3) Figures to the right indicate full marks.  
(4) Illustrate your answers with sketches wherever necessary.

- Q.1 Attempt any FOUR from following SIX questions. 20
- What is the need of engine's cylinder head valves and valve related parts in regular operation of engine? 05
  - Explain the five things that should be done prior to aligning the headlight. 05
  - What is the need of deploying the security and anti theft devices in automobile? 05
  - Explain the working operation of Power mirror system. 05
  - What is double declutching? State its effect on vehicle performance if any with suitable reasoning. 05
  - During the normal running of car on the road surface alternator belt slips from pulley, what will be its effect on battery charging? Explain in detail. 05
- Q.2
- Explain the complete installation procedure in detail for camshaft and its bearings. 10
  - Which type of automotive battery you will suggest for your vehicle? Support your answer with proper justification. 04
  - While diagnosing the seat belt that will not buckle, Technician A looks inside the buckle: Technician A looks inside the buckle and disassembles it and moves any obstructions that may prevent it from latching onto the belt latch. Technician B replaces the buckle if the obstruction cannot be easily removed from the buckle. What is correct? Explain it with justification. 06
- Q.3
- Explain the working of rear window defroster. 06
  - What is the difference between active and passive restraint systems? Explain importance of having restrain system in automobile. 06
  - While discussing the power flow through five speed transmission while it is in first gear, Technician A says that power enters on input shaft, which rotates the countershaft that is engaged with first gear. Technician B says that first gear synchronizer engages with clutching teeth of first gear and locks the gear to the main shaft, allowing power to flow from input gear through the countershaft and to the first gear and the main shaft. Who is correct? Justify your answer. 06
  - Explain the need of effective suspension system. 02
- Q.4
- Explain fuel injection system diagnosis and service. 10
  - Explain trouble diagnosis of final drive. 10
- Q.5
- Explain Power steering diagnosis and service. 10
  - Explain various clutch problems diagnosis and service. 10
- Q.6 Attempt any FOUR from following SIX questions. 20
- How the failure of Cooling system will affect the vehicle performance? 05
  - Explain the need of carrying out starting system diagnosis and service. 05
  - What is the need of having air bag system? 05
  - Explain the operation of Power Lock system. 05
  - Explain the various U Joint problems. 05
  - Explain the brake calliper inspection procedure. 05