

GUJARAT TECHNOLOGICAL UNIVERSITY**B. E. Sem-VI Examination May 2011****Subject code: 160204****Subject Name: Vehicle Maintenance and Garage Practice****Date: 21/05/2011****Time: 10.30 am – 01.00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1 (a) List out the types of vehicle maintenance practices and explain Preventive maintenance with its merits and demerits. **07**

(b) Explain cylinder compression and vacuum test with its importance. **07**

Q.2 (a) Which measuring tool is used to measure clearance between rocker arm and valve stem? Explain the procedure to measure it. What is importance of specified clearance & normally how much it should be? **07**

(b) What should be the sequence of piston rings from piston skirt? Give function of each ring. How the piston ring gap should be arranged to minimize pressure loss? **07**

OR

(b) Which type of valve operating system is used in modern vehicles? Explain Overhead camshaft system with bucket tappet giving neat sketch. **07**

Q.3 (a) Explain cylinder numbering and firing order in V-8 engine. Identify piston pairs for same. **07**

(b) What is cylinder-head gasket? Where it is installed & why? **07**
It is made of which materials generally? When it is required to be replaced? What are the effects on engine performance if head gasket got damaged?

OR

Q.3 (a) Explain how you would check valve timing on an engine with mechanical lifters and on an engine with hydraulic lifters. **07**

(b) Explain different methods to test a solenoid-operated fuel injector. **07**

Q.4 (a) What is back lash in gears? How it can be measured and How it can be adjusted? Explain in detail. **07**

(b) If the vehicle steering is vibrating at high speed, then what may be the reasons and how you solve it? **07**

OR

Q.4 (a) If vehicle body as well as steering vibrates while breaking, what may be the reason and how it can be solved? **07**

(b) Explain wheel alignment with its necessity, different parameters to be set with neat sketch and relation of wheel alignment with tire life. **07**

Q.5 (a) If engine block temperature indicates above 80 °C, list out the possible problems and explain solution of any one in detail. **07**

(b) Explain 3-S service facility in modern workshop & its effect on customer satisfaction as well as dealership business. **07**

OR

Q.5 (a) Give any one sample of job card of automobile workshop, explain the information to be filled up in job card and its importance in overall service procedure. **07**

(b) Write a letter to explain warranty conditions of your company to a customer from whom you received a complaint regarding non availability of warranty on specific parts. **07**