

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE- SEMESTER-VI (NEW) EXAMINATION – WINTER 2024****Subject Code:3160210****Date:25-11-2024****Subject Name:Vehicle Maintenance and Garage Practice****Time:02:30 PM TO 05:00 PM****Total Marks:70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

**Q.1** (a) Which kind of maintenance is more important? why? **03**  
 (b) What are the differences in Garage & Service Station. **04**  
 (c) If your vehicle has troubles of hard steering and excessive tyre wear, what could be the causes and remedies of the problem. **07**

**Q.2** (a) Discuss criteria and requirements of a doorstep service station **03**  
 (b) What would be the possible differences between EV and Conventional vehicle service station **04**  
 (c) Draw a complete layout of a modern automotive service station for Hybrid vehicles **07**

**OR**

(c) Which are the checkings to be done during daily, weekly and monthly maintenance of a vehicle? Discuss in brief. **07**

**Q.3** (a) What is back lash in gears? How it can be measured and how it can be adjusted? **03**  
 (b) Discuss possible causes and remedies of fuel pump failure. **04**  
 (c) List down different servicing tools and equipment used in automobile garage. Explain any two in detail with suitable sketches. **07**

**OR**

**Q.3** (a) Prepare a periodic maintenance schedule for final drive. **03**  
 (b) Describe maintenance and overhauling of cylinder head **04**  
 (c) Explain step by step procedure of crank shaft servicing. **07**

**Q.4** (a) Explain understeer and oversteer effects in a vehicle. **03**  
 (b) Discuss the overhauling of differential in detail. **04**  
 (c) Explain the procedure of overhauling and diagnosis of clutch assembly. **07**

**OR**

**Q.4** (a) Explain Tyre rotation **03**  
 (b) Explain the process of denting for a vehicle. **04**  
 (c) Explain causes for Engine overheating. **07**

**Q.5** (a) How one can improve the Tyre life in four-wheeler? **03**  
 (b) What do you mean by clutch juddering? Discuss its possible causes and remedies **04**  
 (c) What is job card? Prepare sample job card for Car having regular service and problem of engine overheating **07**

**OR**

**Q.5** (a) What are the different causes of corrosion on painted body? **03**  
 (b) Discuss about different types of vehicle documents and information available in them. **04**  
 (c) Explain Lubrication and Maintenance of suspension system **07**

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**BE - SEMESTER-VI (NEW) EXAMINATION – WINTER 2023**

**Subject Code:3160210****Date:05-12-2023****Subject Name: Vehicle Maintenance and Garage Practice****Time:02:30 PM TO 05:00 PM****Total Marks:70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

<b>Q.1</b>	(a) What is Maintenance? Differentiate: Preventive & Breakdown maintenance.	<b>03</b>
	(b) Discuss causes and disadvantages of vehicle breakdown.	<b>04</b>
	(c) Explain the layout of a modern automobile service station with its activities.	<b>07</b>
<b>Q.2</b>	(a) List the measuring instruments and Explain any one with a neat diagram.	<b>03</b>
	(b) Draw the Job card for Four Wheeler used in Modern Workshop.	<b>04</b>
	(c) Explain Wheel balancing and different tyre rotation patterns for Car.	<b>07</b>
	<b>OR</b>	
	(c) Explain in brief daily, weekly and monthly maintenance schedules.	<b>07</b>
<b>Q.3</b>	(a) Explain hydraulic car lift used in automotive service stations.	<b>03</b>
	(b) Explain the bleeding of the hydraulic brake process with a neat sketch.	<b>04</b>
	(c) Discuss different possible causes and remedies for excessive fuel consumption in the vehicle.	<b>07</b>
	<b>OR</b>	
<b>Q.3</b>	(a) Enlist the possible causes and remedies for the clutch assembly maintenance.	<b>03</b>
	(b) What do you mean by steering geometry? Discuss any two terms in detail.	<b>04</b>
	(c) List different service equipment used in service stations. Explain to anyone.	<b>07</b>
<b>Q.4</b>	(a) What do you mean by chassis lubrication? Discuss its importance.	<b>03</b>
	(b) Explain the servicing procedure of the cylinder block.	<b>04</b>
	(c) Explain Lubrication and maintenance of suspension systems.	<b>07</b>
	<b>OR</b>	
<b>Q.4</b>	(a) Explain the process of denting for a vehicle.	<b>03</b>
	(b) Explain overhauling process of a differential in brief	<b>04</b>
	(c) Prepare a periodic maintenance schedule of the Cooling System.	<b>07</b>
<b>Q.5</b>	(a) Explain carburetor tuning process in brief.	<b>03</b>
	(b) Explain the painting process of vehicles.	<b>04</b>
	(c) Which are the different causes for the engine not starting?	<b>07</b>
	<b>OR</b>	
<b>Q.5</b>	(a) Explain maintenance process of propeller shaft.	<b>03</b>
	(b) Explain benefits of auto extended warranty for a vehicle	<b>04</b>
	(c) Explain different types of workshop documents and their use.	<b>07</b>

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VI(NEW) EXAMINATION – WINTER 2022****Subject Code:3160210****Date:14-12-2022****Subject Name:Vehicle Maintenance and Garage Practice****Time:02:30 PM TO 05:00 PM****Total Marks:70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

**Q.1 (a)** What is the purpose of maintenance? **03**  
**(b)** What safety precautions are taken care during doing vehicle maintenance? **04**  
**(c)** Explain in brief daily, weekly and monthly maintenance schedule. **07**

**Q.2 (a)** List of different measuring instruments for wear. Explain any one of them **03**  
**(b)** Explain gravitational method (weight method) for fuel measurement. **04**  
**(c)** Prepare a Layout of modern service station. Enlist the criteria for the selection of location of service station. **07**

**OR**

**(c)** What is Job Card? What is the importance of it? Prepared job card for servicing of Hero Passion. **07**

**Q.3 (a)** Give comparison between different types of service stations. **03**  
**(b)** Explain service procedure of cylinders in detail. **04**  
**(c)** Explain the workflow in service station also give the responsibility of each department. **07**

**OR**

**Q.3 (a)** What is valve tapping? **03**  
**(b)** Explain the servicing procedure of cylinder block. **04**  
**(c)** Explain various tests carried out on diesel injector in detail. **07**

**Q.4 (a)** Explain procedure for dismantling of an engine? **03**  
**(b)** What do you mean by steering geometry? Discuss any two terms in detail. **04**  
**(c)** Which are the different tests carried out for testing brakes? **07**

**OR**

**Q.4 (a)** Explain procedure for Decarbonising of engine. **03**  
**(b)** Discuss the role of service advisor for automobile workshop. **04**  
**(c)** Discuss various stages of painting process for passenger car. **07**

**Q.5 (a)** Which are the different tests carried out for measuring brake efficiency of any vehicle? **03**  
**(b)** What do you mean by clutch juddering? Discuss its possible causes and remedies. **04**  
**(c)** Discuss the brake bleeding procedure in detail. **07**

**OR**

**Q.5 (a)** Discuss the possible causes for clutch slipping. **03**  
**(b)** Draw the trouble shooting chart for any four wheelers. **04**  
**(c)** What are the special tools and basic instruments required for maintenance? **07**

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