

# GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI EXAMINATION – SUMMER 2025

Subject Code: 3160210

Date: 22-05-2025

Subject Name: Vehicle Maintenance and Garage Practice

Time: 10:30 AM TO 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.
4. Simple and non-programmable scientific calculators are allowed.

MARKS

Q.1	(a)	Discuss very briefly about daily and weekly periodic checks required for a car	03
	(b)	What is maintenance? List down different type of maintenance.	04
	(c)	What is vehicle breakdown? Discuss causes and disadvantages of vehicle breakdown	07
Q.2	(a)	List out different type of measuring instruments used in automobile workshop.	03
	(b)	What would be the possible differences between EV and Conventional vehicle service station?	04
	(c)	Discuss advantages and disadvantages of an authorized service station and a private service station.	07
OR			
	(c)	What is Job Card? What is the importance of it? Prepared job card for servicing of Hybrid car.	07
Q.3	(a)	Explain Camber angle, Caster angle and Toe in	03
	(b)	What do you mean by steering geometry? Discuss any two terms in detail.	04
	(c)	Discuss the overhauling of gear box in detail	07
OR			
Q.3	(a)	What is valve tapping?	03
	(b)	Discuss the brake bleeding procedure in detail	04
	(c)	Explain the procedure of overhauling & diagnosis of clutch assembly	07
Q.4	(a)	What do you mean by carburetor tuning process?	03
	(b)	What do you mean by balancing? Give their types.	04
	(c)	Which are the different tests carried out for testing brakes?	07
OR			
Q.4	(a)	Discuss the overhauling of differential in detail	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)	Explain Tyre rotation	03
	(b)	Enlist the possible causes and remedies for hard shifting of gear and Transmission stick in gear	04
	(c)	Give detail maintenance & repair of electrical and ignition system.	07
OR			
Q.5	(a)	Explain cylinder Honing process.	03
	(b)	What do you mean by clutch juddering? Discuss its possible causes and remedies.	04
	(c)	Which are the different causes for engine does not start?	07

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2024****Subject Code:3160210****Date:17-05-2024****Subject Name:Vehicle Maintenance and Garage Practice****Time:10:30 AM TO 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.
4. Simple and non-programmable scientific calculators are allowed.

		<b>MARKS</b>
<b>Q.1</b>	(a) Explain Preventive Maintenance with advantages	<b>03</b>
	(b) Explain two measuring and gauging instruments with diagrams	<b>04</b>
	(c) Prepare a sample job card for a car with necessary details	<b>07</b>
<b>Q.2</b>	(a) Discuss criteria and requirements of an automotive service station	<b>03</b>
	(b) What would be the possible differences between EV and Conventional vehicle service station	<b>04</b>
	(c) Draw a complete layout of a modern automotive service station	<b>07</b>
	<b>OR</b>	
	(c) Discuss about different types of vehicle document and information available in vehicles	<b>07</b>
<b>Q.3</b>	(a) Prepare a periodic maintenance schedule for suspension system	<b>03</b>
	(b) Discuss possible causes and remedies for excessive fuel consumption in fuel	<b>04</b>
	(c) Explain step by step procedure of crank shaft servicing	<b>07</b>
	<b>OR</b>	
<b>Q.3</b>	(a) Explain Camber angle, Caster angle and Toe in	<b>03</b>
	(b) Describe maintenance and overhauling of cylinder head	<b>04</b>
	(c) Explain maintenance and overhauling process of propeller shaft	<b>07</b>
<b>Q.4</b>	(a) Explain valve timing adjustment	<b>03</b>
	(b) Explain cylinder honing process and why it is required?	<b>04</b>
	(c) Explain the procedure of overhauling and diagnosis of clutch assembly.	<b>07</b>
	<b>OR</b>	
<b>Q.4</b>	(a) How one can improve the Tyre life in four wheeler?	<b>03</b>
	(b) Explain function of lubrication system	<b>04</b>
	(c) Explain Brake bleeding procedure	<b>07</b>
<b>Q.5</b>	(a) Explain Tyre rotation	<b>03</b>
	(b) Enlist the possible causes and remedies for hard shifting of gear and Transmission stick in gear	<b>04</b>
	(c) Explain wheel balancing and wheel alignment	<b>07</b>
	<b>OR</b>	
<b>Q.5</b>	(a) Explain painting process of vehicles	<b>03</b>
	(b) Draw the trouble shooting chart for any four wheeler	<b>04</b>
	(c) Explain Lubrication and Maintenance of suspension system	<b>07</b>

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**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2023****Subject Code:3160210****Date:06-07-2023****Subject Name:Vehicle Maintenance and Garage Practice****Time:10:30 AM TO 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.
4. Simple and non-programmable scientific calculators are allowed.

		<b>MARKS</b>
<b>Q.1</b>	(a) Explain Preventive Maintenance with advantages	<b>03</b>
	(b) Explain two measuring and gauging instruments with diagrams	<b>04</b>
	(c) Prepare a sample job card for a car with necessary details	<b>07</b>
<b>Q.2</b>	(a) Discuss criteria and requirements of an automotive service station	<b>03</b>
	(b) What would be the possible differences between EV and Conventional vehicle service station?	<b>04</b>
	(c) Draw a complete layout of a modern automotive service station	<b>07</b>
	<b>OR</b>	
	(c) Discuss about different types of vehicle document and information available in vehicles	<b>07</b>
<b>Q.3</b>	(a) Prepare a periodic maintenance schedule for suspension system	<b>03</b>
	(b) Discuss possible causes and remedies for excessive fuel consumption in fuel	<b>04</b>
	(c) Explain step by step procedure of crank shaft servicing	<b>07</b>
	<b>OR</b>	
<b>Q.3</b>	(a) Explain Camber angle, Caster angle and Toe in	<b>03</b>
	(b) Describe maintenance and overhauling of cylinder head	<b>04</b>
	(c) Explain maintenance and overhauling process of propeller shaft	<b>07</b>
<b>Q.4</b>	(a) Explain valve timing adjustment	<b>03</b>
	(b) Explain cylinder honing process and why it is required?	<b>04</b>
	(c) Explain the procedure of overhauling and diagnosis of clutch assembly.	<b>07</b>
	<b>OR</b>	
<b>Q.4</b>	(a) How one can improve the Tyre life in four wheeler?	<b>03</b>
	(b) Explain function of lubrication system	<b>04</b>
	(c) Explain Brake bleeding procedure	<b>07</b>
<b>Q.5</b>	(a) Explain Tyre rotation	<b>03</b>
	(b) Enlist the possible causes and remedies for hard shifting of gear and Transmission stick in gear	<b>04</b>
	(c) Explain wheel balancing and wheel alignment	<b>07</b>
	<b>OR</b>	
<b>Q.5</b>	(a) Explain painting process of vehicles	<b>03</b>
	(b) Draw the trouble shooting chart for any four wheeler	<b>04</b>
	(c) Explain Lubrication and Maintenance of suspension system	<b>07</b>

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2022****Subject Code:3160210****Date:03/06/2022****Subject Name:Vehicle Maintenance and Garage Practice****Time:10:30 AM TO 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.
4. Simple and non-programmable scientific calculators are allowed.

- Q.1**
- |     |   |           |
|-----|---|-----------|
| (a) | Explain different types of maintenance                                      | <b>03</b> |
| (b) | What are the requirements and important of vehicle maintenance and service? | <b>04</b> |
| (c) | Explain in brief daily, weekly and monthly maintenance schedule.            | <b>07</b> |

- Q.2**
- |     |   |           |
|-----|---|-----------|
| (a) | List of different measuring instruments for wear. Explain any one of them       | <b>03</b> |
| (b) | Explain volumetric methods for fuel measurement.                                | <b>04</b> |
| (c) | Prepare a Layout of modern service station. Mention activity of each work base. | <b>07</b> |

**OR**

- |     |  |           |
|-----|--|-----------|
| (c) | What is Job Card? What is the importance of it? Prepared job card for servicing of Honda activa. | <b>07</b> |
|-----|--|-----------|

- Q.3**
- |     |  |           |
|-----|--|-----------|
| (a) | Give comparison between different types of service stations. | <b>03</b> |
| (b) | Explain service procedure of cylinders in detail.            | <b>04</b> |
| (c) | Discuss the overhauling of gear box in detail.               | <b>07</b> |

**OR**

- Q.3**
- |     |   |           |
|-----|---|-----------|
| (a) | Explain the wheel balancing procedure in detail.                | <b>03</b> |
| (b) | Explain the servicing procedure of cylinder block.              | <b>04</b> |
| (c) | Explain various tests carried out on diesel injector in detail. | <b>07</b> |

- Q.4**
- |     |   |           |
|-----|---|-----------|
| (a) | Discuss the overhauling of differential in detail.                      | <b>03</b> |
| (b) | What do you mean by steering geometry? Discuss any two terms in detail. | <b>04</b> |
| (c) | Which are the different tests carried out for testing brakes?           | <b>07</b> |

**OR**

- Q.4**
- |     |  |           |
|-----|--|-----------|
| (a) | What do you mean by chassis lubrication? Discuss its importance. | <b>03</b> |
| (b) | Discuss the role of service advisor for automobile workshop.     | <b>04</b> |
| (c) | Discuss various stages of painting process for passenger car.    | <b>07</b> |

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

**OR**

- Q.5**
- |     |   |           |
|-----|---|-----------|
| (a) | Discuss the possible causes for clutch slipping.          | <b>03</b> |
| (b) | Draw the trouble shooting chart for any four wheelers.    | <b>04</b> |
| (c) | Which are the different causes for engine does not start? | <b>07</b> |

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