

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER– VI (NEW) EXAMINATION – WINTER 2021****Subject Code:3160212****Date:02/12/2021****Subject Name:Two and Three Vehicle Technology****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) Name the Major two-wheeler manufacturers of India	<b>03</b>
	(b) Draw the layout of two wheelers.	<b>04</b>
	(c) Write a short note on different types of cooling system in two-wheeler.	<b>07</b>
<b>Q.2</b>	(a) Write the constructional and functional difference between two stroke and four stroke SI engine?	<b>03</b>
	(b) Write down merits and demerits of shaft drive over chain drive.	<b>04</b>
	(c) Explain Construction and working of a carburetor with diagram.	<b>07</b>
<b>OR</b>		
	(c) List out Different types of lubrication system used for two wheelers and explain any one in detail with sketch.	<b>07</b>
<b>Q.3</b>	(a) Explain requirement of clutch in vehicle.	<b>03</b>
	(b) Explain constant mesh gear box with neat sketch.	<b>04</b>
	(c) Explain Kick start mechanism for two-wheeler.	<b>07</b>
<b>OR</b>		
<b>Q.3</b>	(a) What are the causes of white smoke and black smoke exhaust?	<b>03</b>
	(b) Why mopeds are using centrifugal clutches? Explain working of Centrifugal clutch with basic diagram.	<b>04</b>
	(c) Write a short note on CVT-Continuously Variable Transmission of Two-wheeler.	<b>07</b>
<b>Q.4</b>	(a) Write down Design Considerations for Suspension System.	<b>03</b>
	(b) Briefly explain Construction details of tires with neat sketch.	<b>04</b>
	(c) With the help of neat sketch explain the working of disk brake used for two wheelers.	<b>07</b>
<b>OR</b>		
<b>Q.4</b>	(a) Draw the layout of passenger rickshaw.	<b>03</b>
	(b) Write the advantages of tubeless tyre over tube tyre.	<b>04</b>
	(c) Explain shock absorber construction and working principle. With neat sketch.	<b>07</b>
<b>Q.5</b>	(a) Define air resistance and gradient resistance.	<b>03</b>
	(b) Draw the lighting diagram for two-wheeler.	<b>04</b>
	(c) Classify various types of frames used in two wheelers. Explain back bone type of frame with neat sketch.	<b>07</b>

**OR**

- Q.5** (a) What is the purpose of ignition system? List out any three ignition system used in two & three wheelers. **03**
- (b) Discuss the working of electric horn used in two wheelers. **04**
- (c) Explain the construction and working of lead-acid battery. **07**

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