

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-VI (NEW) EXAMINATION – WINTER 2024****Subject Code:3160212****Date:06-12-2024****Subject Name: Two and Three Vehicle Technology****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.

		MARKS
Q.1	(a) Classify Engines used in two and three wheelers	03
	(b) Draw a layout of a two wheeler	04
	(c) Explain Construction and working of four stroke petrol engine with a neat diagram.	07
Q.2	(a) Write a note on Two wheeler Battery.	03
	(b) Differentiate tubeless and tube type tires used in two wheelers	04
	(c) Explain the construction and working of Drum brakes with a diagram.	07
	OR	
	(c) Explain different types of engine cranking mechanism used in two and three wheelers in detail	07
Q.3	(a) What do you understand by scavenging? List out advantages of scavenging.	03
	(b) Write note of ignition system of three wheelers.	04
	(c) Explain different type of carburetor used in two wheelers in detail.	07
	OR	
Q.3	(a) Differentiate chain drive and belt drive	03
	(b) Write a note on fuel injection system.	04
	(c) Explain construction and working of Continuously variable transmission (CVT) with a neat diagram.	07
Q.4	(a) Define steering terms. (1) Rake angle (2) Trail (3) Distance Offset.	03
	(b) Write a note on ABS (Antilock Braking System).	04
	(c) Explain Construction and Working of Multi plate Clutch used in three wheelers.	07
	OR	
Q.4	(a) List out different gear shifting mechanism used in two and three wheelers	03
	(b) Draw a port timing diagram of a two wheeler and explain in brief.	04
	(c) Explain handlebar control , instruments and indicators used in two wheelers in detail	07
Q.5	(a) List out different types of frames used in two wheelers.	03
	(b) Write a note of design consideration for two wheeler suspension system.	04
	(c) Explain construction and working of spring and shock absorber with a neat diagram.	07
	OR	
Q.5	(a) List out and compare different cooling system used in two and three wheelers.	03
	(b) Write a note on ergonomics considerations for two and three wheelers.	04
	(c) Explain in Mist and Splash lubrication system with a diagram.	07
