

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2022****Subject Code:3160212****Date:16/06/2022****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.

MARKS

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| Q.1 | (a) Define steering terms. (1) Rake angle (2) Trail (3) distance Offset distance | 03 |
| | (b) Explain working of two stroke engine. | 04 |
| | (c) Explain different cranking mechanism employed in two and three wheeler. | 07 |
| Q.2 | (a) Explain role of carburetor in two wheeler. | 03 |
| | (b) State the criteria considered to select engine for two wheeler. | 04 |
| | (c) Explain in brief mist and splash lubrication system | 07 |
| OR | | |
| | (c) List out scavenging methods. Explain loop scavenging system. | 07 |
| Q.3 | (a) Define following terms.
1. Carburation
2. Scavenging
3. Air cooling system. | 03 |
| | (b) State the design consideration for frame. | 04 |
| | (c) Draw and explain the layout of two wheeler transmission system and label it. | 07 |
| OR | | |
| Q.3 | (a) Define following terms. (1) Shock absorber (2) Spring (3) Frame | 03 |
| | (b) Explain spoke wheel and split disk wheel. | 04 |
| | (c) Explain mono suspension used in two wheeler with sketch. | 07 |
| Q.4 | (a) State the function of suspension system. | 03 |
| | (b) Justify the need of multi-plate clutch in motor cycle. | 04 |
| | (c) Explain difference between battery and magneto ignition system. | 07 |
| OR | | |
| Q.4 | (a) State the material used for frame. | 03 |
| | (b) State main components of battery with their function. | 04 |
| | (c) Differentiate between drum and disk brake. | 07 |
| Q.5 | (a) State the function of following system.
1. Fins
2. Radiator
3. Compression ration | 03 |
| | (b) Explain ergonomic consideration for two wheeler design. | 04 |
| | (c) Explain front telescopic suspension system with sketch. | 07 |

OR

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| Q.5 | (a) | Define (1) Belt drive (2) Chain drive (3) Shaft drive | 03 |
| | (b) | Classify three wheeler and two wheeler. | 04 |
| | (c) | Differentiate between two and three wheeler. | 07 |
