

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2018****Subject Code: 2170204****Date: 29/11/2018****Subject Name: Vehicle Testing & Homologation****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.

		MARKS
<b>Q.1</b>	(a) Define Homologation.	<b>03</b>
	(b) Classify types of dynamometers. Explain prony brake dynamometer.	<b>04</b>
	(c) Explain Morse test.	<b>07</b>
<b>Q.2</b>	(a) Distinguish between active safety system and passive safety system.	<b>03</b>
	(b) Illustrate pass by noise test.	<b>04</b>
	(c) Describe AIS-037.	<b>07</b>
	<b>OR</b>	
<b>Q.3</b>	(c) Describe AIS-038.	<b>07</b>
	(a) Demonstrate gradability test.	<b>03</b>
	(b) Explain following sources of vehicle noise (i) Brake squeal (ii) Combustion noise	<b>04</b>
	(c) Explain steering effort test.	<b>07</b>
	<b>OR</b>	
<b>Q.3</b>	(a) Demonstrate turning circle diameter test.	<b>03</b>
	(b) Explain following sources of vehicle noise (i) Wind noise (ii) Transmission noise	<b>04</b>
	(c) Justify relation between driving habit and fuel economy.	<b>07</b>
<b>Q.4</b>	(a) Define PDI.	<b>03</b>
	(b) Describe roll over test.	<b>04</b>
	(c) Illustrate wind tunnel testing.	<b>07</b>
	<b>OR</b>	
<b>Q.4</b>	(a) Define initial inspection.	<b>03</b>
	(b) Demonstrate fire resistance test.	<b>04</b>
	(c) Classify types of test tracks.	<b>07</b>
<b>Q.5</b>	(a) Justify need of wheel alignment.	<b>03</b>
	(b) Explain crash test.	<b>04</b>
	(c) Describe headlamp alignment.	<b>07</b>
	<b>OR</b>	
<b>Q.5</b>	(a) Justify need of wheel balancing.	<b>03</b>
	(b) Describe side impact test.	<b>04</b>
	(c) Explain four wheel chassis dynamometer with neat sketch.	<b>07</b>

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