

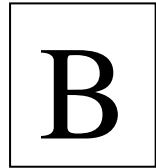


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**SNS College of Technology, Coimbatore-35.**  
**(Autonomous)**

**B.E/B.Tech- Internal Assessment -II**  
**Academic Year 2023 – 2024 (Odd)**



**Fifth Semester**

**Automobile Engineering**

**19AUT302 – VEHICLE DYNAMICS AND STRUCTURES**

**Time: 1<sup>1/2</sup> Hours**

**Maximum Marks: 50**

**Answer All Questions**

**PART - A (5 x 2 = 10 Marks)**

		<b>CO</b>	<b>Blooms</b>
1	Identify the various road tests performed on tire	<b>CO2</b>	<b>Ana</b>
2	Analyze the magic formulae tire model	<b>CO2</b>	<b>Ana</b>
3	Inspect the importance of isolating the vibration in an automobile.	<b>CO3</b>	<b>Ana</b>
4	Compare active suspension system with semi active suspension system	<b>CO3</b>	<b>Ana</b>
5	Identify the key features of Air Suspension system	<b>CO3</b>	<b>Ana</b>

**PART – B (40 Marks)**

6	(a) Inspect the estimation of tire road friction in detail	13	<b>CO2</b>	<b>Ana</b>
	(or)			
	(b) Analyze the tests performed on various road surface for estimating the tire performance	13	<b>CO2</b>	<b>Ana</b>
7	(a) Analyze the Active Suspension system by the use of Quarter Car model with a neat sketch	13	<b>CO3</b>	<b>Ana</b>
	(or)			
	(b) Inspect the key features and working of Skyhook Damping in detail with a neat sketch.	13	<b>CO3</b>	<b>Ana</b>
8.	(a) Analyze the various reasons for tire vibrations in detail.	14	<b>CO2</b>	<b>Ana</b>
	(or)			
	(b) Inspect the sources of vibrations in an Automobile and also explain its preventive measures to provide comfort ride	14	<b>CO3</b>	<b>Ana</b>