

# CBCS SCHEME



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18AU61

## Sixth Semester B.E. Degree Examination, June/July 2024 Automotive Chassis and Suspension

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

### Module-1

- 1 a. Explain briefly with neat figure layout of automobile with reference to power plant. (10 Marks)  
b. With neat figure explain chassis layout with all components. (10 Marks)

OR

- 2 a. Explain briefly frame stresses and frame section. (10 Marks)  
b. How testing of frames is carried out? And also explain effect of brakes on frame stresses. (10 Marks)

### Module-2

- 3 a. List and explain the factors affecting wheel alignment with neat figure. (10 Marks)  
b. List the types of steering system and explain any one with neat figure. (10 Marks)

OR

- 4 a. Explain the following : i) Cornering force ii) Self righting torque. (10 Marks)  
b. List and explain the types of axels with neat figure. (10 Marks)

### Module-3

- 5 a. Explain the following : i) Whirling of propeller shafts  
ii) Universal joints with neat figure. (10 Marks)  
b. Explain the following : i) Double Hooke's joint  
ii) Types of propeller shafts with neat figure. (10 Marks)

OR

- 6 a. Explain briefly the construction of final drive and its type. (10 Marks)  
b. Explain the following : i) Thickness drive ii) Torque tube drive. (10 Marks)

### Module-4

- 7 a. Explain the following : i) Brake efficiency ii) Weight transfer. (10 Marks)  
b. Explain briefly with neat figure classification of Brakes. (10 Marks)

OR

- 8 a. List and explain factors influencing operation of brakes. (10 Marks)  
b. Explain with table trouble shooting of brakes and what are the remedies when brake fails which under mention. (10 Marks)

### Module-5

- 9 a. List and explain types of suspension systems. (10 Marks)  
b. List and explain with table the trouble shooting of suspensions. (10 Marks)

OR

- 10 a. Explain briefly the types of tyres with figure. (10 Marks)  
b. Explain the following : i) Static and dynamic properties of pneumatic tyre  
ii) Factors affecting tyres life. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and/or equations written eg, 42+8 = 50, will be treated as malpractice.