Roll No. _____

END SEMESTER EXAMINATION
SEMESTER-V

COURSE CODE : AE 411 | **DURATION : 3 (THREE)HRS**
COURSE TITLE : AUTOMOBILE CHASSIS | **MAXIMUM MARKS : 75**
SESSION : JUL – DEC' 2021 | **PASS MARKS : 35 %**

NOTE:
1. *All the questions are compulsory*
2. *Attempt any 5 (five) questions.*
3. *Mark for each question is shown against it.*
4. *Assume suitable logical data wherever necessary.*

1.	**(a)**	What are the main components of an automobile? Describe all of them briefly.	**(8)**
	(b)	Explain the advantages and disadvantages of frameless construction over the conventional framed construction.	**(7)**
2.	**(a)**	Discuss the functions of the transmission system in automobile.	**(8)**
	(b)	Write a brief note on sub-frames.	**(7)**
3.	**(a)**	Describe the various types of chassis.	**(7)**
	(b)	State at least six main types of load apply on the frame.	**(8)**
4.	**(a)**	Write short notes on suspension system. What are three main objective of suspension system ?	**(8)**
	(b)	Mention five basic considerations about suspension system. Explain any three of them.	(7)
5.	**(a)**	Discuss the construction of leaf springs and draw the diagram also.	**(10)**
	(b)	Explain the function of suspension springs.	**(5)**
6.	**(a)**	What do you understand by primary function of steering system? Mention four functions of secondary steering system.	**(8)**
	(b)	With neat sketch explain the construction of front axle.	**(7)**
7.	**(a)**	Explain clearly the requirements of automobile brakes.	**(7)**
	(b)	Discuss various factors of wheel alignment.	**(8)**
8.	**(a)**	Explain the various trouble shooting of steering system.	**(7)**
	(b)	Explain the following:	**(8)**
		i) airbag ii) TCS	
		iii) ABS iv) ESP	

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