Roll No. _____

END SEMESTER EXAMINATION
SEMESTER –V

COURSE CODE : AUTOMOBILE POWER TRAIN **DURATION : 3 (THREE)HRS**
COURSE TITLE : AE 505 **MAXIMUM MARKS : 75**
SESSION : JUL-DEC'2021 **PASS MARKS : 35 %**

NOTE: 1.Attempt any 5 (five) full questions
2. Mark for each question is shown against it.
3. Assume suitable logical data wherever necessary.

1.	**(a)**	Explain the principle of friction clutch used in automobiles.	**(4)**
	(b)	Describe construction and working of fluid flywheel.	**(6)**
	(c)	Draw labelled diagram of single plate diaphragm spring clutch.	**(5)**
2.	**(a)**	With the help of road resistance curves, discuss the necessity of gear box in automobiles.	**(7)**
	(b)	Explain construction and working of a typical synchromesh unit.	**(8)**
3.	**(a)**	Explain the working principle of differential using labelled figure.	**(6)**
	(b)	Draw a neat diagram propeller shaft assembly used in automobiles and label the parts.	**(5)**
	(c)	Explain the importance and functions of final drive.	**(4)**
4.	**(a)**	Describe the construction and working of transfer case.	**(7)**
	(b)	With the help of a labelled diagram, explain the Hotchkiss drive used in the vehicles.	**(8)**
5.	**(a)**	With the help of a schematic diagram, explain vacuum assisted power clutch.	**(8)**
	(b)	Discuss the different types of gear trains with neat diagrams.	**(7)**
6.	**(a)**	Describe the construction and working of torque converter with labelled figure.	**(10)**
	(b)	Write a note on free wheel clutch.	**(5)**
7.	**(a)**	Explain construction and working of a typical constant mesh gear box with neat sketches.	**(10)**
	(b)	Write trouble shooting chart of common faults (five) observed in automotive clutches.	**(5)**
8.	**(a)**	Discuss the typical planetary gear set used in automatic transmission.	**(10)**
	(b)	Write trouble shooting chart of common faults (five) observed in manual gear box.	**(5)**

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