Roll No. [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

PRESIDENCY UNIVERSITY

BENGALURU

Mid - Term Examinations – October 2025

Date: 08-10-2025 **Time:** 11.45am to 01.15pm

School: SOE/SOCSE	**Program:** B. Tech (Information Science and Engineering)	
Course Code: MEC3074	**Course Name:** Autonomous Systems and Drones	
Semester: V	**Max Marks**: 50	**Weightage**: 25%

CO - Levels	CO1	CO2	CO3	CO4	CO5
Marks	14	14	22	-	-

Instructions:
   (i) *Read all questions carefully and answer accordingly.*
   (ii) *Do not write anything on the question paper other than roll number.*

Part A

Answer ALL the Questions. Each question carries 2 marks. 5Q x 2M=10M

1	Write the examples of for stationary autonomous systems.	2 Marks	L2	CO1
2	Write the characteristics of Autonomous Systems.	2 Marks	L2	CO1
3	Write the function of ESC and Flight Controller in Drone.	2 Marks	L2	CO2
4	Define Yaw and Pitch with respect to Drone operation.	2 Marks	L2	CO2
5	Explain the key features of Drones	2 Marks	L2	CO3

Part B

Answer the Questions. Total Marks 40M

6.	Autonomous systems are changing the way systems are working in the industry. Write the classification of Autonomous Systems based on different parameters.	10 Marks	L3	CO1
	Or			
7.	The autonomous systems have evolved over the years. Write the historical background and current trend of autonomous systems in	10 Marks	L3	CO1

	detail.			

8.	Write the applications of Autonomous Systems in various domains of science and engineering in detail.	**10 Marks**	**L3**	**CO 2**
	Or			
9.	Write the differences between the Automated Systems and Autonomous Systems.	**10 Marks**	**L3**	**CO 2**

10.	Unmanned aerial vehicles are finding huge applications in engineering. Explain the applications of drones in various domains of engineering briefly.	**10 Marks**	**L3**	**CO 3**
	Or			
11.	Drone contains several key components for smooth operation. Explain the various components used in drones along with their functions briefly.	**10 Marks**	**L3**	**CO 3**

12.	Drones are classified based on several key parameters. Write the classification of Drones based on various parameters.	**10 Marks**	**L3**	**CO 3**
	Or			
13.	Explain the key regulations and guidelines with respect to drone usage at Global and National Level.	**10 Marks**	**L3**	**CO 3**