

GODAWARI COLLEGE

5TH SEMESTER, SIMULATION & MODELING

LAB & ASSIGNMENTS

Lab 1:

1. Draw a system for autonomous aircraft system and explain the diagram. which system does the aircraft systems uses? Please explain your answer
2. Draw a system for college management and show the interactions between sub systems.
3. Name the entities, attributes, activities, events and state variables for the following systems:
 - Cafeteria
 - Inventory
 - Banking
 - A hospital emergency room
 - Communication
 - Gas station
 - Barber shop
4. Design analog computer of
$$\dot{x}_1 = -k_{12}x_1 + k_{21}x_2$$
$$\dot{x}_2 = k_{12}x_1 - (k_{21} + k_{23})x_2$$
$$\dot{x}_3 = k_{23}x_2$$
5. Design analog computer of
A) $KR(t) = At + Bt^2 + Dt$