

## UNIVERSITY OF PETROLEUM AND ENERGY STUDIES, DEHRADUN

Assignment #1, Nov 2023

Programme Name: B.Tech(CSE- AI/ML) Semester : V (B1+B2+B3)

Course Name : Algorithm for Intelligent System & Robotic

Course Code : CSAI3010 Max. Marks : 50

Nos. of page(s): 01

Instructions : Answer the following questions

S. No.		Marks	CO
Q1	Discuss on:  a) Kalman Filter b) Inferential knowledge representation scheme c) Goal stack planning	5x3=15	CO2
Q2	Discuss expert system with one example.	10	CO2
Q3	Differentiate between sonar and Lidar sensors.	5	CO2
Q4	Write down the steps to installation of ROS. Discuss and explain the structure of typical ROS packages and services.	10	СОЗ
Q5	Discuss and explain SLAM and Adaptive Monte Carlo Optimization.	10	CO3