

c)	A robotics engineer claims that an autonomous mobile robot can operate effectively using only exteroceptive sensors. Do you agree with this statement? Justify your answer by exploring the roles of both exteroceptive and proprioceptive sensors and provide examples of situations where each type is necessary.	[Marks-2]	
d)	A mobile delivery robot is designed to operate in outdoor environments. To ensure safe operation, it uses an ultrasonic sensor to detect obstacles and a rain sensor to detect rainfall. a) Construct the Arduino circuit diagram showing the connection of the ultrasonic sensor and rain sensor. b) Generate an Arduino program that performs the following operations: If an obstacle is detected within 20 cm, display "Obstacle Ahead – Stop Robot." If rain is detected, display "Rain Detected – Return to Shelter." If no obstacle and no rain are detected, display "Environment Safe – Continue Operation."	[Marks-5]	