

Congratulations! You passed!

Grade received 95% To pass 80% or higher

Go to next item

1. Which of the following tasks are associated with perception? (Select all that apply)

1 / 1 point

Estimating the motion of other vehicles

Correct

Correct, perception deals with position and motion estimation.

Responding to traffic light state changes

Planning routes on a map

Identifying road signs

Correct

Correct, perception deals with object identification.

2. Which of the following can be on road objects? (Select all that apply)

1 / 1 point

Potholes

Correct

Correct, potholes in the drivable surface are on road objects.

Vehicles

Correct

Correct, vehicles can be on road objects. They can also be off road.

Stop signs

Sidewalks

3. Which of the following tasks pose challenges to perception? (Select all that apply)

1 / 1 point

Detecting, tracking and predicting dynamic object motions

Correct

Handling sensor occlusion and reflection

Correct

Handling sensor uncertainty

Correct

Having sensors work in adverse weather conditions

Correct

4. Which of the following sensors are used for ego localization? (Select all that apply)

0.75 / 1 point

Barometers

Radar

Global Navigation Satellite System (GNSS)

Inertial Measurement Unit (IMU)

Correct

Correct, an IMU provide acceleration and rotation rate measurements from accelerometers and gyroscopes, and can be used to estimate vehicle orientation and aid in localization in general.

You didn't select all the correct answers

5. Which of the following objects would be relevant for perception in adaptive cruise control?

1 / 1 point

Traffic lights

Road signs

Lane markings

Other vehicles

Correct

Correct, adaptive cruise control detects vehicles ahead to control speed and to maintain safe driving distances.