**Lesson 2: Practice Quiz**

**TOTAL POINTS 5**

1.

Question 1

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

**1 / 1 point**



Planning routes on a map



Responding to traffic light state changes



Identifying road signs

**Correct**

Correct, perception deals with object identification.



Estimating the motion of other vehicles

**Correct**

Correct, perception deals with position and motion estimation.

2.

Question 2

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

**1 / 1 point**



Sidewalks



Stop signs



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.

3.

Question 3

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

**1 / 1 point**



Handling sensor uncertainty

**Correct**



Detecting, tracking and predicting dynamic object motions

**Correct**



Having sensors work in adverse weather conditions

**Correct**



Handling sensor occlusion and reflection

**Correct**

4.

Question 4

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

**1 / 1 point**



Global Navigation Satellite System (GNSS)

**Correct**

Correct, a GNSS sensor provides position and velocity measurements, and can be used to estimate vehicle position and orientation for localization.



Radar



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.



Barometers

5.

Question 5

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

**1 / 1 point**



Traffic lights



Road signs



Other vehicles



Lane markings

**Correct**

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