DLMDSEAAD01\_Unit01\_Question01

Which of the following is not a level of driving automation?

* simulated driving automation (1 Pts)
* conditional driving automation (0 Pts)
* high driving automation (0 Pts)
* no driving automation (0 Pts)

DLMDSEAAD01\_Unit01\_Question02

Which of the following is not a variant of the Bayes filter?

* posterior Kalman filter (1 Pts)
* Kalman filter (0 Pts)
* extended Kalman filter (0 Pts)
* unscented Kalman filter (0 Pts)

DLMDSEAAD01\_Unit01\_Question03

Which of the following is the first step of the software stack of self-driving vehicles?

* sensing (1 Pts)
* planning (0 Pts)
* perception (0 Pts)
* control (0 Pts)

DLMDSEAAD01\_Unit01\_Question04

Which of the following is not a method used for trajectory planning?

* particle filter (1 Pts)
* artificial potential field (0 Pts)
* grid-based planning (0 Pts)
* sampling-based planning (0 Pts)

DLMDSEAAD01\_Unit01\_Question05

Which of the following is not considered by object tracking algorithms?

* traffic signs (1 Pts)
* vehicles (0 Pts)
* bicycles (0 Pts)
* pedestrians (0 Pts)

DLMDSEAAD01\_Unit02\_Question01

Which of the following is a proprioceptive sensor?

* inertial measurement unit (1 Pts)
* global navigation system (0 Pts)
* LIDAR (0 Pts)
* camera (0 Pts)

DLMDSEAAD01\_Unit02\_Question02

Which of the following is not a component of inertial measurement units?

* charge-coupled device (1 Pts)
* magnetometer (0 Pts)
* accelerometer (0 Pts)
* angular rate sensor (0 Pts)

DLMDSEAAD01\_Unit02\_Question03

Charge-coupled devices rely on…

* …the inner photoelectric effect. (1 Pts)
* …the Corriolis force. (0 Pts)
* …Newton’s law of inertia. (0 Pts)
* …microwaves. (0 Pts)

DLMDSEAAD01\_Unit02\_Question04

Which of the following is not a modulation mechanism used for RADAR systems?

* artificial potential field approach (1 Pts)
* pulsed approach (0 Pts)
* frequency modulated continuous wave approach (0 Pts)
* continuous wave approach (0 Pts)

DLMDSEAAD01\_Unit02\_Question05

What does the time-of-flight technique measure?

* the time difference between emitting and receiving a light pulse after reflection (1 Pts)
* the duration of a continuous wave (0 Pts)
* the L1 carrier frequency (0 Pts)
* the time a received light pulse needs to be processed (0 Pts)

DLMDSEAAD01\_Unit03\_Question01

Which of the following is not used to model the dynamics of a moving vehicle?

* sensor model (1 Pts)
* longitudinal vehicle model (0 Pts)
* lateral vehicle model (0 Pts)
* vertical vehicle model (0 Pts)

DLMDSEAAD01\_Unit03\_Question02

Which of the following is a type of brake-by-wire system?

* electro-hydraulic braking system (1 Pts)
* longitudinal braking system (0 Pts)
* Lyapunov braking system (0 Pts)
* pneumatic braking system (0 Pts)

DLMDSEAAD01\_Unit03\_Question03

Which of the following is captured in a lateral vehicle model?

* suspension (1 Pts)
* steering (0 Pts)
* lateral tire behavior (0 Pts)
* oversteering (0 Pts)

DLMDSEAAD01\_Unit03\_Question04

Which of the following is not a part of a path tracker?

* engine torque (1 Pts)
* velocity planning (0 Pts)
* look-ahead distance (0 Pts)
* path tracking (0 Pts)

DLMDSEAAD01\_Unit03\_Question05

What is used to model the nonlinear relationship between engine torque and engine speed?

* static engine maps (1 Pts)
* Lyapunov approach (0 Pts)
* moment of inertia (0 Pts)
* aerodynamic drag (0 Pts)

DLMDSEAAD01\_Unit04\_Question01

Which of the following is not a type of vehicle-to-everything communication?

* vehicle-to-camera (1 Pts)
* vehicle-to-infrastructure (0 Pts)
* vehicle-to-vehicle (0 Pts)
* vehicle-to-pedestrian (0 Pts)

DLMDSEAAD01\_Unit04\_Question02

Which of the following is not a connection type related to C-V2X communication?

* outlink (1 Pts)
* sidelink (0 Pts)
* uplink (0 Pts)
* downlink (0 Pts)

DLMDSEAAD01\_Unit04\_Question03

Which mode represents the communication between two types of user equipment without the resource allocation by a base station?

* mode 4 (1 Pts)
* mode 3 (0 Pts)
* mode 2 (0 Pts)
* mode 1 (0 Pts)

DLMDSEAAD01\_Unit04\_Question04

What is PC5-base communication?

* communication between two types of user equipment over sidelinks (1 Pts)
* communication between a user equipment and a base station (0 Pts)
* communication over WiFi (0 Pts)
* communication between two types of user equipment by means of dedicated shot range communication (0 Pts)

DLMDSEAAD01\_Unit04\_Question05

Which of the following is not a layer of the OSI model?

* inner layer (1 Pts)
* application layer (0 Pts)
* data link layer (0 Pts)
* network layer (0 Pts)

DLMDSEAAD01\_Unit05\_Question01

Utiarism is an ethical theory that…

* …aims to reduce negative consequences. (1 Pts)
* …evaluates the impact of the action itself. (0 Pts)
* …aims to do nothing bad. (0 Pts)
* …has the aim of not hurting anybody. (0 Pts)

DLMDSEAAD01\_Unit05\_Question02

Which of the following is not a possible use case for new mobility related to car sharing services?

* autonomous logistics supply chain (1 Pts)
* autonomous valet parking (0 Pts)
* vehicle on demand (0 Pts)
* full automation using driver for extended availability (0 Pts)

DLMDSEAAD01\_Unit05\_Question03

Which of the following is not a shared transportation concept?

* private autonomous vehicle (1 Pts)
* peer-to-peer service (0 Pts)
* private taxi (0 Pts)
* car sharing (0 Pts)

DLMDSEAAD01\_Unit05\_Question04

What is the main argument for changing the interior of level 5 automated vehicles?

* the lack of need for a human driver (1 Pts)
* the increasing number of exterior sensors (0 Pts)
* the high computational power needed (0 Pts)
* new vehicle dynamic models (0 Pts)

DLMDSEAAD01\_Unit05\_Question05

What is a well-known example of a moral dilemma?

* the trolley problem (1 Pts)
* the vehicle model (0 Pts)
* cyber-attacks (0 Pts)
* the problem of coupled response (0 Pts)