APA3 Questions and Answers

1. If the system is unable to find a parking spot, how would you want the situation to be handled?
    a. Timeout system - give control back to driver, ask to continue with error message
2. What do you want this program to do in the event of sensor failures or errors?
    a. Sensor check before engaging the procedure - and it should conduct regular troubleshooting maneuvers to regularly check for sensor errors. In case of error, notify the driver and disable the system.
3. In the event that another car is on course to collide with the car attempting to park, how should the system respond?
    a. Stop the vehicle
4. How should the car choose where to park if given multiple viable spots?
    a. Driver selects the space
5. What level of control do you want the customer to have over the car during remote maneuvering using the app?
    a. All normal controls, brakes and transmission, engine control - no steering
6. How fast should the car be trying to park itself so it's both safe and still efficient?
    a. 30 seconds
7. Are the subsystems listed the only subsystems that are included? Are there limitations to what the APA system can control/use?
    a. That's all
8. Can the APA system use other sensors such as radar or sonar sensors?
    a. See above
9. What are some good ways to add safety while parking for bystanders without distracting the driver?
    a. It's all on the system and driver, like normal parking
10. In what ways besides the brake pedal can the driver be able to stop the APA system, and gain control of the vehicle?
    a. Only abort on moving steering wheel or complete stop, otherwise they can slow
11. What level of maintenance, troubleshooting and debugging capabilities need to be installed in the system?
    a. Be able to sense a faulty sensor and respond accordingly
12. How do you want this program to respond to slanted parking spaces?
    a. Just adjust for gravity
13. Handicap capabilities?
    a. None yet - could be considered
14. What if there is an overlap in manual and mobile controls?
    a. No real solution implemented for this, ideally if activated from app or HMI, lock control through the other.
    b. Our idea - weight sensors for seat belt - instruct them to leave if activated from phone within car
15. Width requirement for perpendicular?
    a. There are requirements but we currently don't have them, need to follow up
16. Should we use guiding lines to help park?

    a. No side cameras, can't detect lines, only parked cars and other obstacles
17. What security features are in place to make sure the user is the driver?
    a. Backend system, exchange certificates to make sure the phone activating the APA is already registered with the car.
18. Where is the HMI?
    a. Dashboard - could be fancier HUD system if desired
19. What happens if the engine is turned off during the maneuver
    a. The system itself will shut down as well
20. What if during the maneuver, the parking space is recalculated to be too small?
    a. This shouldn't happen, only if something changes with the space will this be an error, otherwise all initial calculations can be assumed to be accurate
21. Can the system detect parking spots at a distance?
    a. No, the system has relatively short range, the vehicle must be near the parking spot to be detected.
22. How should the system handle false positives?
    a. In general there's not an ideal means of navigating this, simply give control back to the driver, they have the option to try again

Question Set 2:

23. How should the system react to an EMP from a high orbit nuclear blast?
    a.
24. Do you want any optional features?
    a.
25. How much memory do you want the system to take up? Max or Min?
    a.
26. How should the system differentiate between front, rear, and all wheel drive?
    a.
27. How should the system react when a car in an adjacent spot begins to move?
    a.
28.