omotive Electrical and Engine Performance, 8th Edition pter 25	
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ORT A	NSWER. Write the word or phrase that best completes each statement or answers the question.
1)	A typical immobilizer system consists of what parts?
2)	How is the security information transferred from the key to the vehicle?
3)	What faults will an immobilizer system cause?
4)	What is a passive keyless entry system?
5) '	To avoid damage to the key, what precautions are needed to be performed?
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- 1) Most security systems today use a Radio Frequency Identification (RFID) security system, which has two main components:
 - 1. A key fob is the object that is a decoration on a key ring and usually contains a transmitter used to unlock a vehicle.
 - 2. The transponder key has the transponder electronics integrated in its plastic body.

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2) A transceiver is inside the vehicle and receives the signal transmitted by the transponder in the key.

A "transceiver" functions as both a reviewer and a transmitter. The transceiver is usually mounted on the steering column assembly. The antenna for the transceiver is a coil of wire mounted within the plastic ring that mounts around the lock cylinder.

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- 3) Faults with the immobilizer system can be the cause of one of the following conditions, depending on the exact make and model of a vehicle:
 - No crank condition (the starter motor does not operate)
 - The engine cranks but does not start (fuel disabled in most vehicles)
 - The engine starts but then almost immediately stalls.

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4) A passive system uses the key fob as a transmitter, which communicates with the vehicle as it comes close. The key is identified using one of several antennas around the body of the vehicle and a radio pulse generator in the key housing. Depending on the system, the vehicle is automatically unlocked when a button or sensor on the door handle or trunk release is depressed.

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- 5) To avoid damage to the key, do not allow the key to:
 - Be dropped onto a hard surface
 - Get wet
 - Exposed to any kind of magnetic field
 - Exposed to high temperatures on places, such as the top of the dash under direct sunlight.

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