Phase 2 - Class 8 ELT Requirements FAR 91.207; AIM 6-2-4

Note: The ELT (Emergency Locator Transmitter) is a critical component of all aircraft and has a variety of requirements, including installation, testing, etc. Access to the controls should be somewhere in the cockpit. It is designed to transmit a continuous signal any time it detects a collision - including hard landings. It is wise to tune your communications receiver to 121.5 mhz during shutdown to determine if the unit is transmitting. All ATC facilities light up anytime they detect this signal.

1. In the off chance your ELT has been activated, when must you replace the battery?
2. How often must the ELT be inspected?

Phase 2 - Class 8 Supplemental Oxygen FAR 91.211(a)

Note: Supplemental oxygen is used to prevent Hypoxia, which can occur at different altitudes for different pilots. Hypoxia can have different effects on a pilot and one of them is disorientation - a course in high altitude flying should help you to find your limits and responses. The rules here are minimum guidelines. All altitudes are MSL - mean sea level. These questions are tricky - be careful.

1. How long may a pilot fly above 12,500' before requiring supplemental oxygen?
2. What altitude must all passengers on board be on supplemental oxygen?
3. You are flying an aircraft that requires a co-pilot. Is the co-pilot under the same restrictions as the pilot?

Phase 2 - Class 8 ATC Transponder Use FAR 91.215; AIM 4-1-20

Note: The transponder [transmitter responder] is an automatic device designed to respond with coded information when it is "pinged" by external radar. The basic unit has 4096 codes - 4 octal digits (0-7). The pilot enters the code of 1200 or other code as requested by ATC. ATC may request an "IDENT" in which case the pilot presses the IDENT button which sends another larger blip to the radar making it easy for ATC to locate the aircraft. There are different modes - mode A responds with just the 4 digit code. Mode C also transmits the pressure altitude. Most transponders do not have the pressure altitude capability so it must be connected to an Altitude Encoding Altimeter. The use of the transponder, as well as Mode C capability, is required in various airspaces. When the aircraft is on the ground the transponder is usually kept in the Standby mode (SBY). [New regulations require transponder be on after the engine is started]

1. What class airports require the use of the transponder?
2. Where would you look for the airports requiring mode C capability?
3. What are the dimensions of the mode C veil?