**Questionnaire for Operation of Life Support Systems**

1. **Air Revitalization System**
2. Contaminants in cabin air space include carbon dioxide, particulates ,

Dust & volatile organics .

1. Dust, particles and volatile organics removed by  **catalytic oxidation** followed by chemical adsorption .
2. Carbon dioxide is removed by  **sorbent beds** which are regenerated.
3. **Oxygen Generation System**
4. Creates oxygen from water, done by Electrolysis **.**
5. Splits up water into  **oxygen and hydrogen gases** using electricity.
6. A battery, electrodes and  **electrolytes**  are needed to convert water into oxygen and hydrogen gases.
7. **Atmospheric Control and Supply System**
8. **Same proportions of nitrogen and oxygen** aremixed together in cabin.
9. Nitrogen and oxygen are delivered from pressurized tanks .
10. The overall  **cabin pressure is controlled** by the amount of Nitrogen provided to it.

1. **Sabatier System**
2. Uses  **carbon dioxide** recovered from Air Revitalization System.
3. Uses  **hydrogen**  made from the Oxygen Generation System.
4. Produces water for the Water Recovery system and Oxygen Generation system.
5. Methane is  **vented overboard** but could be  **converted into hydrogen .**
6. **Temperature and Humidity Control System**
7. Maintain  **comfortable temperatures and humidity** for the air cabins.
8. Temperature is  **controlled by velocity of air flow .**
9. **Water vapor is removed from the air** and sent to the Water Recovery and Management system.
10. **Water Recovery and Management System**
11. Water is recovered from  **Temperature and Humidity control system .**
12. Water is generated by the  **Sabatier System .**
13. Water is recovered from the  **Urine of Astronauts .**
14. Water is recovered from  **baths, cleaning and hygiene activities .**