Mountain Canyon Flying Low Level-Fire Qualification Syllabus

1. **Preparing for Mountain/Canyon Flight Low Level**
   - Section A: Preparing the Aircraft Specific to Mountain/Canyon Flying Low Level
   - Section B: Preparing the Pilot
     - Stabilized Canyon Configuration
     - Turn Radius vs Airspeed
     - Emergency Canyon Turns
2. **Navigation in Mountain and Canyon Areas**
   - Section A: Flight Planning
   - Section B: Types of Drainage Navigation
     - Ridge Crossing, Escape Maneuvers
     - Descending in to Confined Drainage
     - Contouring Flying
3. **Flying the Mountains and Canyons**
   - Section A: Decent, Approach, and Landing
     - Descent
     - Flying the Approach
     - Go-Arounds
     - Use of Flaps
     - Takeoff Roll, Climb Out
4. **Target Observation**
   - Section A: Entry Path
   - Section B: Area Selection
   - Section C: Abort Strategy
5. **Mountain and Canyon Meteorology**
   - Section A: General Mountain Meteorology
     - Circulation and Pressure Patterns
     - Orographic Influence, Solar Influence
     - Combinations of Orographic and Thermal Influence
     - Wind and Waves
   - Section B: Canyon Meteorology
     - Diurnal Effect
     - Convergence Effect
     - Venturi Effect
     - Turbulence
6. **Fire Weather and Smoke Management**
   - Section A: Fire Weather in Complex Terrain
     - The effects of aspect and elevation on
     - humidity and temperature
     - Wind & Wind composition
     - Winds of most concern
     - The effects of slope inclination angle and wind on fire behavior
     - Fire-induced winds
     - Visibility Limitations
7. **Density Altitude and Aircraft Performance**
   - Section A: Determining Density Altitude (DA)
   - Section B: Reduction in Engine Horsepower due to DA Increase
   - Section C: Power Loading and Weight Reduction
     - Weight Reduction Needed to Gain Equivalent Power Loading at a Higher DA
   - Section D: Takeoff Performance
   - Section E: Landing Performance
   - Section F: Climb Performance
   - Section C: Abort Strategy
8. **Emergencies and Forced Landings**
   - Section A: Precautionary and Forced Landings
     - Precautionary Landings
     - Forced Landings