

**III B.Tech II Semester Supplementary Examinations, April/May 2005**  
**AIRCRAFT SYSTEMS**  
**(Aeronautical Engineering)**

**Time: 3 hours**

**Max Marks: 80**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. What are the various systems used in the airplanes. Describe relative merits and demerits of the hydraulic and pneumatic systems.
2. With the help of a neat sketch show the working of a landing gear. Explain a retractable system of the landing gear.
3. Draw a neat sketch and describe the autopilot system of an airplane.
4. (a) What is instrument landing system. Explain its characteristics.  
(b) Describe a typical communication system.
5. What are the different lubrication systems of aircraft engines. Discuss the working of a lubrication system of a typical aircraft engine.
6. What are the reasons for aircraft fire. Discuss the characteristics and working of a fire protection system used in the aircrafts.
7. Describe the principal and working of various pressure measuring gauges with neat sketches.
8. Write short notes on the following:
  - (a) De icing and Anti icing
  - (b) Engine instruments
  - (c) Digital fly by wire system.

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