

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

Time: 3 hours

Max Marks: 80

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

1. (a) Explain different modes of operation of hydraulic controllers. [8]
(b) How the power can be activated in aircraft engines? [8]
2. (a) List out various types of landing gear systems in common use. [8]
(b) Using a block diagram explain aircraft landing gear system. [8]
3. (a) Differentiate between Fully powered and Power actuated Flight control systems. [8]
(b) How does a push-pull rod mechanism is supplemented in Auto-pilot system? [8]
4. (a) Explain the general operation of FFCU. [8]
(b) Explain in detail how fuel spray enhances the efficiency of engine operation. [8]
5. Write short notes on the following: [16]
 - (a) Breaker assembly in high- tension magnet to ignition system.
 - (b) Distributor.
 - (c) Ignition on switches.
 - (d) Spark plugs.
6. (a) Explain the working principle of evaporative refrigeration system with a neat sketch. [8]
(b) How the fire can be controlled in an aircraft system. [8]
7. (a) Explain the three degrees of freedom as applicable to gyro. [8]
(b) Write about 'rigidity', and 'precision' of a gyroscope. [8]
8. Write short notes on the following: [4x4=16]
 - (a) Tachometers
 - (b) Oil pressure indicators
 - (c) Fuel flow meters
 - (d) Thermocouple type temperature gauges
