

III B.Tech II Semester Supplementary Examinations, Apr/May 2006
AIRCRAFT PRODUCTION TECHNIQUES
(Aeronautical Engineering)

Time: 3 hours**Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Explain the function and operation of the following tools: [3×4]
 - i. Allen wrench
 - ii. Socket wrench
 - iii. Taps and Dies
 - iv. Chiseles.(b) Write short note on 'Hammers'. [4]
2. (a) How do you assess the machining accuracy in EDM process?
(b) Define and derive the expression for metal removal rate for of Electro-discharge machining (EDM) process. [8+8]
3. How do you classify the presses? Explain them briefly. [16]
4. Write notes on the following: [8+8]
 - (a) Friction welding
 - (b) Explosive welding.
5. (a) What is the purpose of hardening operation? List down various hardening defects.
(b) How do you classify the quenching media? What precautions must be taken during quenching operation? [8+8]
6. (a) Write notes on the following treatments employed to protect magnesium alloy parts:
 - i. Sealed Chrome-pickle treatment
 - ii. Dichromate treatment . [2×4](b) What is the function of 'thinners' and 'reducers'?
(c) What is the purpose of using additives in paints? [4+4]
7. What do you understand by Flight Testing of an aircraft? What is its importance and how it is carried out? [16]
8. What is the need of factory automation? What are the advantages and disadvantages of automated factory over manually operated factory? [16]
