

**Code: 9A21405**

B.Tech II Year II Semester (R09) Supplementary Examinations December/January 2015/2016

**AIRCRAFT PRODUCTION TECHNOLOGY**

(Aeronautical Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 Explain the general principles of the following casting processes:
  - (a) Sand casting.
  - (b) Die casting.
  - (c) Centrifugal casting.
- 2 Explain the principles of following welding operations:
  - (a) Arc welding.
  - (b) Gas welding.
  - (c) Thermit welding.
- 3
  - (a) Explain the grinding machine with neat sketch.
  - (b) Write short notes on shaping machine and also list out merits, demerits and applications.
- 4
  - (a) Explain in detail the bending operation.
  - (b) Explain the super plastic forming with neat sketch.
- 5 Explain the working principles applications of abrasive jet machining and ultrasonic machining with neat sketches.
- 6
  - (a) Explain the terms pickling and polishing.
  - (b) What are the various causes of corrosion and explain the methods of prevention?
- 7
  - (a) Differentiate between the bolted and riveted joints.
  - (b) Classify jigs and fixtures.
- 8 Explain the following NDT methods:
  - (a) Dye penetrant test.
  - (b) X-ray test.
  - (c) Magnetic particle test.

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