

**B.TECH. (AEROSPACE ENGINEERING)  
(BTAE)****Term-End Examination  
December 2012****BAS-004 : WORKSHOP TECHNOLOGY***Time : 3 hours**Maximum Marks : 70*

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*Note : Answer any seven questions. All questions carry equal marks.*

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1. (a) Classify various types of manufacturing processes in brief. 5
- (b) Define the following : 5
  - (i) Piece or job shop production
  - (ii) Anisotropy
  - (iii) brittleness
  - (iv) Recrystallisation
  - (v) Toughness
2. (a) What is Bronze ? Discuss its principle alloys. 5
- (b) Explain hot rolling process with neat sketch. 5
3. (a) Explain briefly with neat sketches different processes of extrusion. List out their relative merits and demerits. 5

- (b) What is Pattern ? Discuss some common materials used for Pattern making. 5
4. (a) What are the methods of moulding ? Explain any one process in brief. 5
- (b) What is the purpose of 'Gate'. 5
5. (a) State the various equipments used in oxy-acetylene gas welding. Explain welding torch in detail. 5
- (b) What are Fluxes ? Why they are used ? State commonly used fluxes for welding. 5
6. (a) What is the function of Lathe machine ? Explain its working with the help of a block diagram. 5
- (b) Explain the functioning of Taper Turning attachment of a Lathe machine. 5
7. (a) Explain the quick return mechanism for a shaper machine in detail. 5
- (b) Describe in brief simple indexing mechanism in detail. 5
8. (a) What are the general properties of Cast Iron ? Explain any three types of cast iron in brief. 5
- (b) Differentiate between Hot working and cold working. 5

9. (a) Explain in brief the cutting tool materials. 5
- (b) Describe milling cutter and explain upmilling and down milling with neat sketches. 5
10. (a) Explain the following terms. 5
- (i) Clearance fit
  - (ii) Interference fit
  - (iii) Transition fit
  - (iv) Minimum clearance
  - (v) Maximum clearance
- (b) Draw a sketch of micrometer and name the various parts. 5
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