

**B.TECH. IN AEROSPACE ENGINEERING
(BTAE)**

01148

Term-End Examination

June, 2010

BAS-004 : WORKSHOP TECHNOLOGY

Time : 3 hours

Maximum Marks : 70

Note : Attempt any seven questions.

1. (a) What do you mean by an allowance ? 5+5
List out different allowances.

(b) Why coarse sand is better for steel casting
than fine grained sand ?

2. (a) Explain the process of submerged arc 5+5
welding.

(b) Explain briefly different types of fluxes and
filler rods used in gas welding.

3. (a) Why is cleaning of metal important for 5+5
successful resistance welding ? Explain.

(b) Why is flux generally used in Gas welding ?
What characteristics are required for a flux ?

4. (a) What are the advantages of forging of metals ? 5+5
- (b) Describe in brief the different types of sheet metal forming processes.
5. (a) Explain briefly the application of NC/CNC machines. 5+5
- (b) What are the principle parts of a milling machine ? Describe any two operations performed in a milling machine.
6. (a) What steps are involved in the preparation of moulding for casting ? Describe the common defects found in sand casting. 5+5
- (b) List the different types of mechanical properties of materials. State their importance in the design of a machine or structural elements.
7. (a) Name the various alloys of copper and comment on their utility in industries. 5+5
- (b) Explain briefly with neat sketch the process of wire drawing.

8. (a) Describe how flame cutting is done stating its principle. Also briefly explain the method of oxygen cutting. 5+5
- (b) What do you understand by gas welding? Describe with sketch the equipment required for oxy-acetylene welding.
9. (a) What are the safety precautions, you would recommend while making jobs in carpentry shop? 5+5
- (b) Explain the difference between the allowance and clearance. Differentiate between unilateral and bilateral tolerance.
10. (a) Explain the principle of a Vernier scale. What is the principal advantage of a vernier calliper? 5+5
- (b) What are the different parts of a shaper? Explain the various shaping operations performed in a shaper with the help of diagram.
-