

**B.Tech. (AEROSPACE ENGINEERING)
(BTAE)**

Term-End Examination

00449

June, 2015

BAS-004 : WORKSHOP TECHNOLOGY

Time : 3 hours

Maximum Marks : 70

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

1. (a) Distinguish between Mould and Core. 5
(b) Enumerate the essential properties of Mould and Core materials. 5

2. (a) What is meant by Welding ? Distinguish between Pressure Welding and Fusion Welding. Give examples of each. 5
(b) Explain, with the help of a neat sketch, how Oxy-Acetylene gas cutting is carried out. 5

3. (a) Explain the different functions of coating of shielded electrodes. 5
(b) Show, with the help of a neat sketch, the different parts of a Planer machine. Explain the functions of each part. 5

4. (a) State the operations that can be performed on a Lathe machine. 5
- (b) Explain how gear tooth can be cut in Milling machine. 5
5. (a) Discuss the advantages and limitations of Hot working of a metal. 5
- (b) Name any two alloying elements other than carbon which form steel of higher strength and higher hardness. 5
6. (a) What is eutectoid steel ? How is this steel hardened ? 5
- (b) What is Swage Block ? How is it specified ? State its uses. 5
7. (a) A cutting tool tip is invariably tempered after hardening. Explain, why. 5
- (b) Name the metals commonly used in sheet metal work. Give briefly the properties of each. 5
8. (a) Write notes on the following : 5
- (i) Anvil
- (ii) Sledge Hammer

- (b) State the difference between the following pairs : 5
- (i) Drill and Reamer
 - (ii) File and Scraper
 - (iii) Tap and Die
 - (iv) Hacksaw and Chisel
 - (v) Scriber and Centre Punch
9. (a) What is Fit ? Name three types of fits and their uses, by giving sketches. 5
- (b) Describe the uses of limit gauges giving suitable sketches. 5
10. (a) A micrometer has 50 circular divisions on its circular scale. Its pitch is 0.5 mm. What is its least count ? 5
- (b) The main scale of a Vernier caliper has smallest division of 1 mm. Its Vernier scale has 25 divisions coinciding with 24 divisions of the main scale. Find the least count of the instrument. 5
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