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

**Term-End Examination
December, 2010**

BAS-004 : WORKSHOP TECHNOLOGY

Time : 3 hours

Maximum Marks : 70

Note : *Answer any seven questions.*

1. (a) Name the widely used common purpose 5+5 lathe. State the differences between this common purpose lathe and capstan lathe.
(b) Explain with neat sketch the operation of plain turning on a lathe.

2. (a) What is meant by size of a portable and a 5+5 radial drilling machine ?
(b) Briefly discuss the main parts of a drilling machine.

3. (a) Name three types of striking tools used in 5+5 carpentry and discuss their working.
(b) Explain how a depth marking gauge and an ordinary marking gauge work in carpentry.

4. (a) Briefly discuss the main properties of 5+5
moulding sand.
- (b) Explain how grain flow in forging gives a
good forged part.
5. (a) Discuss the materials generally used in sheet 5+5
metal work.
- (b) Explain with suitable sketch the types of
joints used in sheet metal work.
6. (a) State the advantages of Aluminium alloy 5+5
over ferrous alloy.
- (b) Discuss how carbon content in steel,
influence the strength and ductility of plain
carbon steel.
7. (a) What is centrifugal casting ? Discuss its 5+5
advantages and applications.
- (b) Why cold work metals require annealing ?
Discuss the stages that we come across
during annealing.
8. (a) Define welding. Distinguish between 5+5
pressure welding and fusion welding giving
examples of each.
- (b) Explain the purpose of using electrode and
flux during welding. Briefly describe the
working of the shielded arc welding.

9. (a) Describe the types of flames obtained in an oxy-acetylene gas welding process giving applications. 5+5
- (b) Discuss briefly the defects generally encountered with welding.
10. (a) Explain with a neat sketch the limits of hole and shaft, tolerance of hole and shaft and allowance. 5+5
- (b) What is fit ? Name three main fits and explain them with a neat sketch.
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