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## B. Tech.

## (SEM. II) EXAMINATION, 2006-07

## **WORKSHOP TECHNOLOGY**

Time: 2 Hours] [Total Marks: 50]

**Note:** (1) Attempts **all 4** questions, choice are there within.

- (2) Marks allotted to each question are indicated in right-hand column.
- 1 Attempt any four parts of the following: 4+4+3+3=14
  - (a) Explain in brief the process of applying varnish and polish on wood.
  - (b) Discuss the economics of each wood finishing process.
  - (c) Explain in brief properties and uses of glues.
  - (d) List different types of paints. List the requirements of quality paint. Why thinners are used with paints.
  - (e) Explain various methods of seasoning timber. Also mention advantage of each process.
  - (f) Mention the characteristics of a good preservative of wood. What is case hardening of wood?

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- Attempt any four parts of the following : 3+3+3+3=12
  - (a) Name different types of moulding sand. Also explain the composition of moulding sand. What is permeability?
  - (b) List pattern making tools. Name at least six types of patterns and describe any of them.
  - (c) Explain the functions and importance of Gates and Riser. Also list various types gates.
  - (d) Explain core making in foundry.
  - (e) List common sand casting defects and give their causes.
  - (f) Explain shake-out, fettling, snagging and pickling operations.
- 3 Attempt any four parts of the following : 3+3+3+3=12
  - (a) Name different measuring tools used in fitting and indicate the application/purpose of each tool.
  - (b) Describe in brief method of cutting internal or external thread.
  - (c) Mention uses of marking tools, surface plate and reamers.
  - (d) Describe anyone are welding process that uses nonconsumable electrodes.
  - (e) With the help of a neat sketch explain MIG welding process. Also mention its industrial applications.
  - (f) Mention various safety precautions, which should be used while welding.

## OR

(f) Describe in brief with a neat sketch submerged arc welding process. Also list its industrial applications.

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- 4 Attempt any two parts of the following: 6+6=12
  - (a) Advantages of CAD/CAM in Agriculture Engineering.
  - (b) List various components of NC machines. Also give the function of these components. What is APT ?
  - (c) Differentiate between CNC and DNC machines.
  - (d) Describe briefly CNC programming languages. Give suitable example for turning of a bar.