

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 404

Roll No.

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**B. Tech.**

(SEM. II) THEORY EXAMINATION 2010-11

**MANUFACTURING PROCESSES***Time : 2 Hours**Total Marks : 50***Note :** (i) Attempt all questions.

(ii) Marks allotted to each question are indicated on right hand side.

**SECTION—A**

1. This section contains 10 questions. All questions are compulsory.

**(10×1=10)**

- (a) Working mechanism of shaper is known as .....
- (b) One of the specifications to define the size of lathe is .....
- (c) Cylinder used for storing Acetylene gas is first filled with .....
- (d) Cast iron fails showing ..... fracture.
- (e) Metals having ..... property can be easily drawn into wires.
- (f) Solder is an alloy of Tin and .....

- (g) Shrinkage allowance on master pattern is .....
- (h) Tungsten filament on electric bulbs are made by .....
- (i) Property of ..... helps the casting to be easily taken out from the moulding sand.
- (j) In galvanizing process the surface is coated with .....

### SECTION—B

2. Attempt any three questions : (3×5=15)

- (a) Explain the following :
  - (i) Toughness                      (ii) Hardness
  - (iii) Malleability                  (iv) Fatigue
  - (v) Plasticity
- (b) What are brasses ? List various types of brasses giving their uses.
- (c) What do you understand by heat treatment of carbon steels ? Explain any Process in detail.
- (d) Draw a labeled diagram of universal milling machine. Also list various operations performed on it.
- (e) Write a note on the following :
  - (i) Types of Plant layout
  - (ii) Cement Concrete

### SECTION—C

3. Question (a) is compulsory and carries Seven marks. (25)

Attempt any three more questions from the remaining (all carry six marks) :

- (a) Draw labeled diagram of three types of flames used in Oxyacetylene gas welding. Also give their uses.
- (b) Explain Powder metallurgy process. Also give its advantages and applications.
- (c) What are the important properties which are essential in a good moulding sand ? Explain in detail.
- (d) What do you understand by Extrusion process ? What are the items made by this process ? Explain in detail giving suitable examples.
- (e) What are the ingredients of moulding sand ? What is the effect of particle size on surface quality of casting ?
- (f) Write notes on :
  - (i) Composite materials
  - (ii) Plastics.