

## Diploma in Civil Engineering / Diploma in Electrical & Mechanical Engineering

Term-End Examination

June, 2011

### BET-026 : WORKSHOP TECHNOLOGY

Time : 2 hours

Maximum Marks : 70

**Note :** Question 1 is compulsory. Answer any six questions from Part A and two questions from Part B.

1. Answer any seven questions by choosing one from given choices. 2x7=14
- (a) The saw which is used for accurate cutting of wood in all directions regardless of wood grains :
- |                 |                   |
|-----------------|-------------------|
| (i) Panel saw   | (ii) Dovetail saw |
| (iii) Tenon saw | (iv) Compass saw  |
- (b) Two wooden pieces of same section are joined at an angle such that line of joint bisects the angle between two pieces. The joint is called :
- |             |               |
|-------------|---------------|
| (i) Mortise | (ii) Mitre    |
| (iii) Tenon | (iv) Dovetail |
- (c) Colour coding is used on pattern. A black colour indicates :
- |                                |                             |
|--------------------------------|-----------------------------|
| (i) surface not to be machined | (ii) surface to be machined |
| (iii) parting surface          | (iv) core prints            |

- (d) A core of shape of slab is made in core box of type :
- (i) slickle
  - (ii) loose piece
  - (iii) split
  - (iv) dump
- (e) A core suitable to produce a blind hole in casting is called :
- (i) horizontal core
  - (ii) vertical core
  - (iii) balanced core
  - (iv) cover core
- (f) In which pipe joint lead is used as packing to prevent leakage ?
- (i) Expansion joint
  - (ii) Spigot and Socket joint
  - (iii) Socket joint
  - (iv) Flanged joint
- (g) In which of the tin-smithy joints solder is used ?
- (i) Lap joint
  - (ii) Flange joint
  - (iii) Seam joint
  - (iv) Hem joint
- (h) The solder contains lead and tin. The solder that contains 50% of each is :
- (i) electronic solder
  - (ii) soft solder
  - (iii) plumbers solder
  - (iv) medium solder
- (i) The welding processes in which electrode is not consumed are :
- (i) carbon arc and TIG
  - (ii) TIG and MIG
  - (iii) manual arc and MIG
  - (iv) MIG and atomic hydrogen

- (j) The gas flame extends from torch tip to certain length. The temperature is highest :
- (i) on the outside of the flame
  - (ii) along the centre line of the flame
  - (iii) at the torch tip inner core
  - (iv) at the tip of the flame

## PART - A

Answer any six questions

6x6=36

2. What do you understand by chiselling in wood work ? Sketch three chiselling operations.
3. Describe three types of wood pattern with the help of sketches.
4. Describe types and properties of moulding sand.
5. Sketch cupola furnace and describe various zones. How cupola is charged ?
6. Sketch a bench - vice and name its parts. What are other vices used in fitting practice ?
7. What are different tools that are used in plumbing work ? Give short description of each.
8. What are fluxes ? Where are they used ? Describe some fluxing agents.
9. Describe the processes of submerged arc welding and electro-slag welding.

## PART - B

Answer **any two** questions.

**2x10=20**

10. What is forging ? What are different materials that are forged ? Describe forging operations.
  11. Why do we heat treat metals ? Describe different processes of heat treatment.
  12. What is a lathe machine ? Mention different types of lathes. Describe three operations that can be performed on lathe.
  13. What are painter's tools ? Describe different types of paints and their constituents.
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