

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

01975

**Term-End Examination**

**June, 2010**

**BET-026 : WORKSHOP TECHNOLOGY**

*Time : 2 hours*

*Maximum Marks : 70*

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**Note :** *Part 'A' is compulsory. Answer any other seven questions from Part 'B'. All questions in Part 'B' carry same marks.*

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**PART-A**

1. Answer *any seven* of the following questions. Answers should be to the point and no explanation is needed : **2x7=14**
- (a) Choose the marking gauge from the list for
- (i) marking two parallel lines for making tenon joint and
  - (ii) marking parallel lines from an edge.
- List :  
Mitre gauge, Trammels, Mortise gauge, Marking gauge.
- (b) Name two planing tools used in wood work.
- (c) In pattern making practice name the core boxes for producing :
- (i) cylindrical core and
  - (ii) core of irregular shape.

- (d) Name following sands used in moulds :
- (i) The sand which comes in direct contact of molten metal.
  - (ii) The sand which avoids sticking of green sand to pattern.
- (e) Select two from the following which help in directional solidification of molten metal in the mould.
- (i) Chills
  - (ii) Gates
  - (iii) Risers
  - (iv) Core
- (f) In Fitting practice which vice can hold flat job and which can hold a cylindrical job ?
- (i) Pin-vice
  - (ii) Pipe-vice
  - (iii) Hand-vice
  - (iv) Bench-vice
- (g) Which fluxes are used in gas welding of ferrous metal and copper alloys.
- (h) The cutting angles in hot and cold chisels respectively are \_\_\_\_\_ and \_\_\_\_\_ .
- (i) Name tools for scribing a long line and large circle on metal surface.

## PART-B

1. Describe properties of moulding sand. Make a list of types of moulding sand. 8x7=56
2. Sketch a file and mark different parts. List the functions of file and mention its material.
3. Explain types of joints used in Tin-Smithy with the help of sketches.
4. Although acetylene is explosive at pressure above atmosphere, it is used at high pressure in gas welding. Explain how two gases used in gas welding are stored.
5. Describe MIG and TIG welding processes.
6. Describe following forging processes :  
Upsetting, Drawing down and Punching.
7. What is annealing ? What properties are improved through annealing treatment ? Does hardening induce any bad property ? Which treatment follows hardening ?
8. What is a lathe centre and what purpose does it serve ? Describe different types of centres and sketch them.
9. Explain the process of taper turning by using taper turning attachment.

10. Describe process of thread cutting on lathe and explain the function of thread chasing dial.
  11. What characteristics are desirable in a good paint ? List constituents of paint and give brief description.
  12. What is a core and why it is used in moulding ? Describe different types of core.
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