

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

01410

Term-End Examination

December, 2010

BET-026 : WORKSHOP TECHNOLOGY

Time : 2 hours

Maximum Marks : 70

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

1. Answer **any seven** questions by choosing one from given choices. **2x7=14**
- (a) Mortis gauge is used
- (i) for checking the squareness of work piece.
 - (ii) for marking a line parallel to an edge.
 - (iii) for marking two parallel lines.
 - (iv) for measuring any angle.
- (b) Which saw is used for profile cutting ?
- (i) Panel saw.
 - (ii) Compass saw.
 - (iii) Dovetail saw.
 - (iv) Tenon saw.

- (c) Patterns are made in
- (i) Wood
 - (ii) Metal
 - (iii) Wax
 - (iv) All above
- (d) In colour coding of pattern, a surface with colour represents.
- (i) surface not to be machined.
 - (ii) surface to be machined.
 - (iii) parting surface.
 - (iv) core prints.
- (e) Core sand is
- (i) silica sand with 20% clay.
 - (ii) silica sand with mixture of oils.
 - (iii) sand applied on surface of mould to come in contact with molten metal.
 - (iv) sand used between cope and drag.
- (f) Which is not the function of a riser in sand mould?
- (i) Ensuring that mould cavity has been filled.
 - (ii) Faster cooling of thick section of casting.
 - (iii) Allowing gases to escape.
 - (iv) Feeding molten metal to casting when it shrinks.
- (g) Which is not made in high carbon steel ?
- (i) Spanner
 - (ii) Chisel
 - (iii) File
 - (iv) Die

- (h) Single cut files are used
 - (i) for rough filing.
 - (ii) on very hard material.
 - (iii) on non ferrous material.
 - (iv) for final finish.
- (i) Which solder contains highest % of lead ?
 - (i) Soft solder.
 - (ii) Medium solder.
 - (iii) Electronic solder.
 - (iv) Plumber's solder.
- (j) Which is not a shearing process?
 - (i) Piercing.
 - (ii) Notching.
 - (iii) Coining.
 - (iv) Punching.

PART - A

Answer *any six* questions :-

6x6=36

2. Describe three grooving tools used in wood working.
3. Describe four joints used in carpentry work.
4. What is a loose piece pattern and how does it differ from multipiece pattern.
5. What are ingredients of moulding sand ? Explain in brief.
6. What are chills and exothermic materials ? What role do they play in casting?
7. Describe metals used in smithy work ?
8. Which gases are used in gas welding process ? Describe gas cylinders used in gas welding.
9. List the processes of heat treatment and mention the objectives of such treatment.

PART - B

Answer *any two* questions :-

2x10=20

10. State functions of lathe. Make a list of different types of lathe. Make a simple sketch and describe functions of *any two* parts of lathe.
 11. What are characteristics of a good paint ? Give description of constituents of paints.
 12. What equipments are used in electric arc welding ? Describe MIG and TIG processes.
 13. Describe *any five* tools used in smithy process.
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