

**DIPLOMA IN CIVIL ENGINEERING / (DCLE(G))  
DIPLOMA IN ELECTRICAL AND MECHANICAL  
ENGINEERING (DEME)**

**DCLEVI / DMEVI / DELVI / DECVI / DCSVI**

00198

**Term-End Examination**

**June, 2014**

**BET-026 : WORKSHOP TECHNOLOGY**

*Time : 2 hours*

*Maximum Marks : 70*

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*Note : Part A is compulsory. Answer any **seven** questions  
from Part B.*

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**PART A**

1. Answer **seven** questions. *2×7=14*
- (a) Identify carpenter's holding device
- (i) Miter square
  - (ii) Bridle
  - (iii) Bench hook
  - (iv) Bench vice
- (b) In which carpentry joint are short, round pieces of wood used to strengthen the joint ?
- (i) Fillet
  - (ii) Dove Tail
  - (iii) Mortise
  - (iv) Dowel

- (c) In making joints in wood, which term will mean creation of two additional surfaces ?
- (i) Chamfering
  - (ii) Grooving
  - (iii) Rebate
  - (iv) Bevel
- (d) Which pattern is used for mass production of small casting ?
- (i) Multiple piece pattern
  - (ii) Gated pattern
  - (iii) Loose piece pattern
  - (iv) Match plate pattern
- (e) A core print
- (i) Produces projection in casting
  - (ii) Is a recess in pattern
  - (iii) Produces recess in the casting
  - (iv) Is an added projection on a pattern
- (f) Which of the following are added to moulding sand to improve its properties ?
- (i) Wood flour and corn flour
  - (ii) Water
  - (iii) Molasses and linseed oil
  - (iv) Portland cement
- (g) In fitting practice, small diameter jobs are held in
- (i) Tool maker's vice
  - (ii) Pin vice
  - (iii) Hand vice
  - (iv) Bench vice

- (h) Which of the following represents increasing roughness of file ?
- (i) Second Cut, Bastard, Rough
  - (ii) Smooth, Rough, Bastard
  - (iii) Bastard, Rough, Second Cut
  - (iv) Second Cut, Rough, Bastard
- (i) Lip angle of a twist drill is
- (i)  $59^\circ$
  - (ii)  $159^\circ$
  - (iii)  $118^\circ$
  - (iv)  $18^\circ$
- (j) In which of the following pipe joints is a flange ring mounted on one of the pipes ?
- (i) Spigot and Socket joint
  - (ii) Flanged joint
  - (iii) Socket joint
  - (iv) Expansion joint

## **PART B**

2. What is a varnish and where is it used ? What purposes are served by varnish ? Give composition of varnish and describe types of varnish. 8
3. (a) In which machine are threads cut on cylindrical work pieces ? Give complete management of thread cutting. 4
- (b) How do you hold a job in lathe machine ? Describe the device in which job needs no centring, it is centred when held in the device. 4
4. (a) Describe different hammers used in smithy and forging. 4
- (b) Which forging process is used to increase the length of a job ? In how many different ways does the process increase the length ? 4
5. (a) In which welding process is arc submerged in flux ? Describe this process. 4
- (b) What are two basic welding processes ? Make the list of equipment used in the two welding processes. 4
6. (a) What are fluxing agents ? Where are they used ? Give examples of some fluxing agents. 4
- (b) What materials are used in tin smithy works ? Describe these materials. What are stakes ? Show any two stakes. 4

7. (a) Describe the operations in plumbing. What are the materials in which pipes are made ? 4
- (b) On what bases are files classified ? Describe the files based on shape of cross-section. 4
8. (a) What is cupola ? Draw cupola and mark various parts and zones. 6
- (b) What is a core used in foundry ? Where are cores prints made ? 2
9. (a) Describe various carpentry joints. Show three of them in figures. 4
- (b) Describe process of painting on new woodwork and old woodwork. 4
10. (a) How is a taper made on a cylindrical workpiece with the help of a single tool ? What is this tool called ? Show a knurled surface. Which tool is used for obtaining knurled surface ? What other tools are used in lathe machining ? 5
- (b) Show four types of rivet heads. Give two examples where riveted joints are used. 3
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