



C09-M-306

3250

**BOARD DIPLOMA EXAMINATION, (C-09)**  
**APRIL/MAY—2015**  
**DME—THIRD SEMESTER EXAMINATION**  
**MANUFACTURING TECHNOLOGY—I**

Time : 3 hours ]

[ Total Marks : 80

**PART—A**

3×10=30

**Instructions** : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. What is dead centre?
2. How is drilling operation performed in a lathe?
3. List out any six types of lathe.
4. List out the quick return mechanisms used in a planer.
5. Mention any three advantages of broaching.
6. How do cutting fluids improve machine tool life?
7. List any three limitations of gas metal arc welding.
8. Write the principle of atomic hydrogen arc welding.
9. Give any six examples of instruments used for linear measurements.
10. List out the practical applications of toolmaker's microscope.

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**PART—B**

10×5=50

- Instructions :** (1) Answer *any five* questions.  
(2) Each question carries **ten** marks.  
(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

- 11.** Describe the working principle of a semiautomatic lathe with a neat sketch.
- 12.** Write short notes on the following parts :  
(a) Steady rest  
(b) Tail stock  
(c) 3-jaw chuck
- 13.** Write the functions of all the parts of slotter with a line diagram.
- 14.** Explain the following nondestructive testing of welds :  
(a) Magnetic particle test  
(b) Ultrasonic test
- 15.** What is brazing? Explain the process of brazing.
- 16.** Explain the principle and working of an optical flat with a line diagram.
- 17.** (a) Describe the main features of automatic lathe.  
(b) Explain different operations performed by a shaper.
- 18.** (a) Explain the rotary continuous broaching machine with a line diagram.  
(b) Write short notes on the following :  
(i) Soluble oil  
(ii) Chemical compound

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