



C14-M-306

4253

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL—2018

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

1. List out any three advantages of capstan lathe over engine lathe.
2. State the need of a copying lathe.
3. List out any six types of lathes.
4. What is the working principle of shaper?
5. How do you specify a slotter?
6. What are the work holding devices in planer?
7. Classify cutting fluids used in machining.
8. List any six different methods of arc welding.
9. List any three advantages of submerged arc welding.
10. Sketch an oxy-acetylene flame and identify various zones.

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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.** Write short notes on the following parts :
- (a) Steady rest
 - (b) Tail stock
 - (c) 3-Jaw chuck
- 12.** Describe the functions of the following lathe parts with neat sketches :
- (a) Bed
 - (b) Head stock
 - (c) Carriage
- 13.** Explain any two of the work holding devices used in shaper with a line diagram.
- 14.** Draw a neat sketch of standard double housing planer and explain its parts.
- 15.** Explain horizontal broaching machine with a neat sketch.
- 16.** Describe the functions of cutting fluids.
- 17.** Explain the following non-destructive testing of welds :
- (a) Ultrasonic testing
 - (b) Liquid penetration test
- 18.** What is meant by TIG welding? Explain the process with a diagram and state its advantages and limitations.
