



C14-M-306

4254

BOARD DIPLOMA EXAMINATION, (C-14)
MARCH/APRIL—2016
DME—THIRD SEMESTER EXAMINATION

PRODUCTION 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. How the size of engine lathe is specified. 3
2. List out any six work holding devices used in engine lathe. $\frac{1}{2} \times 6 = 3$
3. Mention various cutting tool materials used for lathe tools. $1 \times 3 = 3$
4. Write the basic operations done on the shaper. 3
5. Briefly explain the working principle of slotter with neat sketch. 3
6. List out various types of planers. 3
7. How does cutting fluid improve tool life? 3
8. Write the classification of welding. 3

* 9. Write about the forward and backward gas welding techniques. 1½+1½=3

10. What are the various defects in welding? 3

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. List different methods of taper turning and explain any two methods of taper turning. 4+3+3=10

12. Draw a line diagram of Capstan lathe and describe the functions of main parts. 4+6=10

13. Draw a line diagram of slotter, indicate its main parts on it and explain them. 4+6=10

14. Explain hydraulic system for quick return mechanism of shaper with neat sketch. 5+5=10

15. (a) Explain the rotary table continuous broaching machine with a line diagram. 6

(b) Draw a neat sketch of internal pull broach and label its parts. 4

16. (a) Write short notes on the following : 3+3=6

(i) Soluble oil

(ii) Chemical compounds 3

(b) Mention any eight properties of cutting fluids. ½×8=4

* 17. Explain the submerged arc welding with the help of neat sketch. Write the advantages and limitations of it. 6+2+2=10

18. What is brazing? What are the different methods of brazing? Explain any two types of brazing. 2+2+3+3=10
