



C14-M-306

4254

BOARD DIPLOMA EXAMINATION, (C-14)
MARCH/APRIL—2018
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) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Write any six different types of lathe machines. $\frac{1}{2} \times 6 = 3$
2. Mention the cutting tool signature. 3
3. Define the following terms with respect to the lathe : $1\frac{1}{2} \times 2 = 3$
 - (a) Feed
 - (b) Depth of cut
4. State the working principle of shaper. 3
5. List any three different types of planers. $1 \times 3 = 3$
6. Briefly explain the working principle of slotter. 3
7. State the purpose of lubrication. 3
8. Write any three differences between pressure welding and fusion welding. $1 \times 3 = 3$

- * 9. Briefly explain 'straight polarity' and 'reverse polarity' in arc welding. 1½×2=3
10. Mention any three types of non-destructive tests used in welds. 1×3=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. Write short notes on the following lathe parts : 4+3+3=10
 (a) Bed
 (b) Tail stock
 (c) 3-jaw chuck
12. Describe the working principle of Swiss-type automatic screw machine with line diagram. 5+5=10
13. Draw the line diagram of slotter and explain its main parts on it. 5+5=10
14. Explain with neat sketch, open- and cross-belt drive mechanisms in planer. 5+5=10
15. (a) Classify various types of broaching machines. 5
 (b) Draw a neat sketch of horizontal broaching machine and label its parts. 5
16. Explain the methods of application cutting fluids. 10
17. Write short notes on the following welding techniques : 5+5=10
 (a) Leftward welding
 (b) Rightward welding
18. With a neat diagram, explain the procedure of submerged arc welding and state any two advantages. 4+4+2=10
