



C14-M-306

4254

**BOARD DIPLOMA EXAMINATION, (C-14)**  
**OCT/NOV—2015**  
**DME—THIRD SEMESTER EXAMINATION**  
**PRODUCTION TECHNOLOGY—I**

Time : 3 hours ]

[ Total Marks : 80

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**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 a lathe can be specified?
2. Find the angle at which the compound rest to be swiveled to cut a taper from 30 mm diameter rod.
3. Write any three differences between Capstan and Turret Lathes.
4. List out any three operations can be performed using shaper.
5. Define cutting speed, feed and depth of cut with respect to the shaping machine.
6. List out any three types of planer machines.
7. Write short note on soluble oils.
8. Differentiate between pressure welding and fusion welding.

- \* 9. What are the different gas welding techniques?
10. Mention three requirements of good soldering flux.

**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. Draw the line diagram of an engine lathe label its parts and explain the construction details of lathe carriage. 5+5=10
12. Explain the nomenclature of lathe single point cutting tool with sketches. 10
13. Draw the line diagram of double housing planer label its parts and explain construction details of table and bed only. 5+2½+2½=10
14. Explain Whitworth quick return mechanism of slotter with the help of the line diagram. 5+5=10
15. (a) Write six advantages and six limitations of broaching. 6  
(b) Draw the sketch of an internal pull broach and indicate elements on it. 4
16. (a) Mention any three important properties of cutting fluids. 3  
(b) Write short note on different types of lubricants. 7
17. Explain the method of submerged arc welding with a neat sketch. Mention one advantage, one limitation and one application. 7+1+1+1=10
- \* 18. (a) Explain the principle of flame cutting. 3  
(b) Write three advantages and three limitations of gas welding. 3  
(c) Write short note on brazing. 4

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