



C16-M-304

6245

BOARD DIPLOMA EXAMINATION, (C-16)

OCT/NOV—2017

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. What are live centre and dead centre?
2. List out different work-holding devices used in engine lathe.
3. What is the difference between automatic and semi-automatic lathes?
4. Explain the working principle of a slotter.
5. List out any three operations performed on a slotter.
6. How the cutting fluids reduce the temperature in metal cutting?
7. State the difference between soldering and brazing.
8. Write the different types of gas welding techniques.

\* 9. What is a comparator? State its use.

10. Write the practical applications of toolmaker's microscope.

**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. Explain the nomenclature of lathe single point cutting tool with sketches. 5+5=10

12. Draw a line diagram of turret lathe and describe the functions of its main parts. 5+5=10

13. Draw a line diagram of shaper. Label and explain the parts. 5+5=10

14. Draw a neat sketch of vertical broaching machine and explain its working.

15. (a) Discuss the properties of cutting fluids. 5

(b) Describe the properties of lubricants. 5

16. Explain the procedure for submerged arc welding with a neat sketch. State its advantages and applications. 3+3+2+2=10

17. Briefly explain the working principle of MIG welding with a neat sketch. 5+5=10

18. Describe the working principle of an optical comparator with a neat sketch. 5+5=10

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