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C16-DME-304

**6245**

**BOARD DIPLOMA EXAMINATION, (C-16)**

**MARCH/APRIL—2021**

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

1. State the differences between three jaw chuck and four jaw chuck.
2. List out any six types of lathe.
3. Give any three differences between turret lathe and capstan lathe.
4. Write any three advantages of hydraulic shaper.
5. List out quick return mechanisms used in planer.
6. Mention any three purposes of lubricants.
7. Write the different types of gas welding techniques.
8. State the differences between soldering and brazing.
9. List out the mechanical comparators.
10. Write the applications of autocollimator.

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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 criterion for valuation is the content but not the length of the answer.

11. Draw a line diagram of engine lathe and describe the functions of main parts.
12. Describe briefly the operation of copying lathe with a neat sketch.
13. Explain with a neat sketch crank and slotted lever mechanism used in a shaper.
14. Explain the rotary continuous broaching machine with a line diagram.
15. Write any four functions of cutting fluids. Explain different methods of application of cutting fluids.
16. Explain the procedure for shielded metal arc welding. State its advantages.
17. Explain the following non-destructive testing of welds :
  - (a) Magnetic particle test
  - (b) Ultrasonic test
18. Explain the working of profilometer with a neat sketch.

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