



C16-M-304

6245

BOARD DIPLOMA EXAMINATION, (C-16)

JUNE—2019

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. State the working principle of lathe.
2. Write the tool signature of a single point cutting tool.
3. Give any three differences between a turret lathe and capstan lathe.
4. State any three differences between shaper and planer.
5. List out the operations performed on a slotter.
6. State any three properties of cutting fluids.
7. Give the classification of welding processes.
8. Mention advantages and Limitations of gas welding.
9. List various instruments used for measuring surface roughness.
10. State the working principle of tool maker's microscope.

\*

## PART—B

10×5=50

- Instructions :** (1) Answer *any five* questions.  
(2) Each question carries **ten** marks.  
(3) Answer should be comprehensive and the criteria for valuation are the content but not the length of the answer.

11. With the help of sketches explain any five lathe operations.
12. Draw a line diagram of capstan lathe and describe the function of its main parts.
13. Explain the principle of whitworth quick return mechanism used in shaper with line diagram.
14. Explain the working principle of broaching with a line diagram. State the advantages and limitations of broaching.
15. List out three types of Lubricants with examples. Describe the properties of lubricants.
16. Explain the principle of arc welding with a neat sketch and list out different equipments and accessories used in it.
17. Explain TIG welding process with the help of a sketch and state its advantages.
18. Define Comparator. Write the classification of comparators. Describe the working principle of sigma mechanical comparator with a neat sketch.

\*\*\*

\*