



C09-M-306

3250

BOARD DIPLOMA EXAMINATION, (C-09)
MARCH/APRIL—2014
DME—THIRD SEMESTER EXAMINATION
MANUFACTURING 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 is the function of lathe?
2. Mention the uses of tailstock.
3. List any six tool-holding devices in Capstan lathe.
4. Explain the working principle of shaper.
5. Define broach.
6. Mention three functions of cutting fluid.
7. List any six accessories used in arc welding.
8. List the types of oxy-acetylene flames in gas welding.
9. Differentiate between precision and non-precision measuring instruments.
10. What is comparator?

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

- 11.** Draw a neat sketch of Capstan lathe, label the parts and explain them.
- 12.** Explain the following lathe operations with diagrams :
- (a) Knurling
 - (b) Forming
 - (c) Parting off
 - (d) Chamfering
- 13.** (a) Write any five differences between automatic and semi-automatic lathes.
(b) Explain the working principle of planner with sketch.
- 14.** Draw a neat sketch of slotting machine, label the parts and explain them.
- 15.** (a) Draw a neat sketch of vertical broaching machine and explain it.
(b) Explain any five properties of lubricants.
- 16.** Define welding. Explain the principle of gas welding with sketch. Mention any four advantages of gas welding.
- 17.** Explain ultrasonic welding with neat sketch and mention its advantages and disadvantages.
- 18.** With the aid of neat sketch, explain optical comparator.
