



C09-M-306

3250

BOARD DIPLOMA EXAMINATION, (C-09)
MARCH/APRIL—2017
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. How is the size of engine Lathe specified? 3
2. Write the tool signature of single-point cutting tool. 3
3. List out different work-holding devices used in engine Lathe. 3
4. List out different types of driving mechanisms in Shaper. 3
5. State the advantages and limitations of Broaching. 1½+1½
6. Write any three factors to be considered while selecting a cutting fluid. 3
7. List out the equipment necessary of Gas Welding. 3

- * 8. State the differences between straight and reverse polarity in arc welding. 3
9. Write the classification of mechanical comparators. 3
10. Define (a) precision instruments and (b) non-precision instruments. $1\frac{1}{2}+1\frac{1}{2}$

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 Capstan Lathe and describe the functions of each part. 5+5
12. Differentiate Automatic and Semi-automatic Lathes. 5+5
13. (a) Describe the principle of taper turning with a sketch. 5
(b) Explain the working principle of slotter. 5
14. Draw a neat sketch of planer and explain the parts. 5+5
15. (a) Write a short note on Horizontal Continuous Broaching Machine with a line diagram. $2\frac{1}{2}+2\frac{1}{2}$
(b) Explain the various methods of application of cutting fluids. 5
16. Describe briefly the submerged Arc Welding and state its advantages and limitations. 6+2+2
- * 17. Explain ultrasonic welding with a neat sketch. State its advantages and disadvantages. 3+3+2+2
18. Explain the working of profilometer with a neat sketch. 5+5
