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C09–M–306

3250

BOARD DIPLOMA EXAMINATION, (C–09)

MARCH/APRIL—2018

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. List out any six applications of copying lathe.

2. State the working principle of lathe.

3. List out any six types of lathes.

4. List various types of broaching machines.

5. Explain the working principle of shaper.

6. What are the types of lubricants?

7. What are the limitations of gas welding?

8. What is the difference between pressure welding and non-pressure welding (fusion)?

9. What is an angle gauge?

10. Write the applications of autocollimator.

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 line diagram of engine lathe and describe functions of main parts. 5+5=10

12. List out various methods of taper turning and explain about tailstock set over method. 2+4+4=10

13. Explain the quick return mechanism of a planer table with a line diagram. 5+5=10

14. *(a)* Explain the principle of arc welding. 5

(b) What are the basic differences between arc welding and submerged arc welding? 5

15. Explain the principle of gas welding with a neat sketch and list out different equipments, and accessories used in gas welding. 4+4+1+1=10

16. *(a)* State advantages and limitations of broaching machine. 5

(b) What are the functions of cutting fluids? 5

17. *(a)* List out all general lathe operations. 5

(b) Draw a line diagram of shaper and label the parts. 5

18. Describe the working of tool maker's microscope with a neat sketch. 5+5=10

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