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C14–M–306

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BOARD DIPLOMA EXAMINATION, (C–14)

MARCH/APRIL—2017

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. What is dead centre? 3

2. List three different methods of taper turning. 3

3. What is the difference between automatic and semi-automatic lathes? 3

4. How shapers are classified? 3

5. State the advantages of the hydraulic drive over a crank-type drive. 3

6. How is slotter differ from shaper? 3

7. Write any three factors to be considered while selecting the cutting fluids. 3

8. Briefly explain the principle of flame cutting. 3

9. What are pressure welding and fusion welding? 3

10. What are the different types of oxyacetylene flames? 3

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 the functions of its main parts. 4+6=10

12. Draw a line diagram of Capston lathe and describe the functions of its main parts. 4+6=10

13. Explain the principle of whitworth quick return mechanism of shaper with neat sketch. 10

14. Draw a line diagram of slotter and indicates its main parts and explain. 4+2+4=10

15. Draw a neat sketch of vertical broaching machine and explain its working. 5+5=10

16. *(a)* Mention any four functions of cutting fluids.

(b) Explain the methods of applications of cutting fluids. 4+6=10

17. Explain the principle of gas welding with neat sketch and describe the different equipments and accessories used in gas welding. 6+2+2=10

18. Explain the principle of atomic hydrogen welding with neat sketch. Mention one advantage, one disadvantage and one application of atomic hydrogen welding. 7+1+1+1=10

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