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C14–M–306

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BOARD DIPLOMA EXAMINATION, (C–14)

OCT/NOV—2018

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. Write any three differences between capstan and turret lathes.

2. What are the purposes of steady rest and follower rest?

3. Briefly explain the function of a lathe with neat sketch.

4. Give the classification of the shaping machines.

5. Define cutting speed, feed and depth of cut with respect to shaping machine.

6. List out any three types of planer machine.

7. Write a short note on straight oils.

8. Write three differences between soldering and brazing.

9. Sketch oxy-acetalene flame and identify various zones.

10. List out any three types of welding defect.

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. Explain the construction details of a capstan lathe with the help of neat sketch. 5+5=10

12. Write the methods of taper turning and explain any two methods with neat sketches. 2+4+4=10

13. Draw the line diagram of slotter. Explain the construction details. 5+5=10

14. Explain open and cross-belt table drive (fast and loose pulley drive) mechanism of planer with neat sketch. 5+5=10

15. *(a)* Draw the line diagram of vertical broaching machine and mention the parts on it. 6

(b) Explain any two broaching operations with sketches. 4

16. *(a)* Explain any three properties of lubricants. 6

(b) Write any four functions of cutting fluids. 4

17. Explain the process of tungsten inert gas (TIG) welding with a neat sketch. Mention one advantage, one limitation and one application. 7+1+1+1=10

18. *(a)* State three advantages of welding.

(b) List out different gas welding techniques. Explain any one of them. 3+4=7

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