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C23-M–305

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BOARD DIPLOMA EXAMINATION, (C-23)

OCTOBER/NOVEMBER—2024

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 any three work holding devices used in lathe machine.

2. List out any three types of lathe machines.

3. List out any three operations performed on a slotter machine.

4. List any three operations performed on planer machine.

5. List any three moulding sand properties used in foundry.

6. List any three types of patterns in foundry.

7. State any three functions of lubricant.

8. List any three properties of cutting fluids.

9. List out any three advantages of welding.

10. State the principle of flame cutting process.

PART—B

10×5=50

Instructions : (1) Answer *any* **five** questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. Explain the following lathe operations with legible sketches : 3+3+4

(a) Turning

(b) Taper turning

(c) Thread cutting

12. Describe the working of Capstan lathe with legible sketch. 5+5

13. Describe the construction and working principle of planer with legible sketch. 5+5

14. Explain with legible sketch the crunk and slotted lever mechanism for obtaining the quick-return motion in shaper. 5+5

15. Explain the working principle of hot chamber die casting used in foundry with a legible sketch. 5+5

16. State the need of metal coatings. List any four types of metal coating processes and write one application for each process. 2+4+4

17. Explain the principle of Arc welding with a legible sketch. 5+5

18. Explain the working of MIG welding with a legible sketch. 5+5

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