

# TDM 32 Manufacturing Technology

399

REG. NO

OCTOBER 2021

Time: Three hours

Maximum Marks: 75

- Note:
1. Answer ALL the questions in PART-A (1 mark each)
  2. Answer any ONE question from each unit in PART-B (3 marks each)
  3. Answer any ONE question from each unit in PART-C (10 marks each)
  4. The question paper contains TWO Pages

## PART-A (1x10=10)

1. What are the various types of Patterns?
2. List down the methods of cleaning the Cast Materials.
3. Show what type of welding cannot be done using Submerged arc welding.
4. What are the various types of Welded Joints?
5. State the advantage of Forging Operation.
6. List the various Hot Working operations.
7. Name a few work holding devices used in Lathe.
8. What are the various types of Drilling Machines?
9. Name the various types of Planers.
10. List the operations that can be done on Shaper machine.

## PART-B (3x5=15)

### UNIT-I

11. Illustrate CO<sub>2</sub> process of Core making.
12. What is Chilled casting? State its application.

### UNIT-II

13. Compare TIG welding process with MIG welding process.
14. What are the three types of flames in Gas welding?

### UNIT-III

15. Compare Hot working process with Cold working process.
16. Compare Press forging with Hammer forging.

### UNIT-IV

17. Compare Capstan Lathe with Turret Lathe.
18. Differentiate between drilling and boring operation.

### UNIT-V

19. Differentiate between Planer and Shaper.
20. Explain the specification of Slotter.

PART-C (10x5=50)

## UNIT-I

21. Explain with neat sketch the steps involved in making a Green Sand Mould.
22. What are the instruments used to measure furnace temperature? Explain the principle and working of Optical Pyranometer.

## UNIT-II

23. Sketch and explain the Arc Welding Equipments.
24. What are the methods of testing welded joints? Explain any one non destructive method of testing welded joint.

## UNIT-III

25. Sketch and explain the Air Lift Hammer. Making use of your own data, work out the capacity of drop hammer.
26. Explain with neat sketch the working of Induction furnace. How can the furnace temperature be controlled? Identify its advantages.

## UNIT-IV

27. Explain with simple sketch the principle parts of Lathe and its functions.
28. Sketch and explain the nomenclature of twist drill.

## UNIT-V

29. What are the various Quick Return Mechanisms available in Planner? Explain open belt & cross belt quick return mechanism.
30. Explain with neat sketch the Crank & slotted link mechanism of Shaper. How can the stroke length be varied in it?

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