

**M-305 MANUFACTURING TECHNOLOGY- I**  
**Blue Print of a Model Question Paper**

S. No	Chapter Name	Periods Allocated	Weightage Allocated	Question Wise Distribution of Weightage			Question Wise Distribution of Marks		
				R	U	Ap	R	U	Ap
1	Production Lathes	14	26	01	01	2	03	03	20
2	Shaper, Slotter, and Planer	14	26	01	01	2	03	03	20
3	Foundry	09	16	01	01	1	03	03	10
4	Cutting Fluids and Metal Coatings	09	16	01	01	1	03	03	10
5	Welding	14	26	01	01	2	03	03	20
<b>TOTAL</b>		<b>60</b>	<b>110</b>	<b>05</b>	<b>05</b>	<b>08</b>	<b>15</b>	<b>15</b>	<b>80</b>

**Unit Test - 1**

Q.No	Question from the Chapter	Bloom's category	Marks allocated	CO addressed
<b>Part - A (16 marks)</b>				
1	Production Lathes, Shaper, Slotter, and Planer	R,U	4	CO1,CO2
2	Production Lathes	U	6	CO1,CO2
3,4,5	Shaper, Slotter, and Planer	U	6	CO1,CO2
<b>Part - B (24 marks)</b>				
6	Production Lathes	Ap	8	CO1
7	Shaper, Slotter, and Planers	Ap	8	CO2
8	Production Lathes, Shaper, Slotter, and Planers	Ap	8	CO1,CO2

**Unit Test - 2**

Q.No	Question from the topic	Bloom's category	Marks allocated	CO addressed
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Part - A (16 marks)				
1	Foundry, Cutting Fluids and Metal Coatings Welding	R,U	4	CO3,CO4,CO5
2	Foundry	U	3	CO3
3	Cutting Fluids and Metal Coatings	U	3	CO4
4,5	Welding	U	6	CO5
Part - B (24 marks)				
6	Foundry	Ap	8	CO3
7	Cutting Fluids and Metal Coatings	Ap	8	CO4
8	Welding	Ap	8	CO5

R-Remembering; U-Understanding; Ap-Appling; An- Analysing

**C23-M-305**

**MODEL PAPER**  
**Unit Test - I**  
**Manufacturing Technology – I**

Time : 90 Minutes

Total Marks: **40**

**PART – A**

**Instructions: 1<sup>st</sup> Question having 4 one mark questions, and remaining 4 Questions carry 3 marks each**

- (a) Specification of lathe.  
(b) Lathe cutting tool is a single point cutting tool. (True/False)  
(c) Basic difference between shaper and slotter.  
(d) significance of clearance angle.
- List out any six lathe operations.
- List out the different parts of a shaper.
- State the main differences between planner and shaper.
- How do you specify a shaper.

**PART – B**

**Instructions: Part B consists of 3 Units. Answer any one full question from each unit. Each question carries 8 marks and may have sub questions.**

- Describe the functions of lathe bed and lathe head stock with the help of sketch.  
(OR)  
Explain any two methods of taper turning carried out on lathe machine.
- Explain the different operations performed by the shaper  
(OR)  
Explain the Whitworth quick return mechanism of a slotter with line diagram.
- Explain any two operations performed on engine lathe with sketches.  
(OR)  
Describe the construction and working principle of planar with legible sketch

**MODEL PAPER**  
**Unit Test -II**  
**Manufacturing Technology – I (M-305)**

Time : 90 Minutes

Total Marks: **40**

**PART – A**

**Instructions:** *1<sup>st</sup> Question having 4 one mark questions, and remaining 4 Questions carry 3 marks each*

1. (a) Basic limitation of cutting fluid  
(b) Welding is a permanent joint. (True/False)  
(c) List out fluxes.  
(d) Define casting.
2. List three relative merits of the cutting fluids and coolants.
3. Define pattern.
4. List three reasons for welding defects
5. Write any three differences between soldering and brazing.

**PART – B**

**Instructions:** *Part B consists of 3 Units. Answer any one full question from each unit. Each question carries 8 marks and may have sub questions.*

6. Explain various properties of moulding sand

(OR)

Write short notes on centrifugal casting process.

7. Explain properties and applications of cutting fluids and coolants.

(OR)

Explain various properties and applications of lubricants.

8. What are the common defects of welding? State their causes and remedies?

(OR)

Explain the principle of gas welding with a neat sketch and write its advantages and applications?

**MODEL PAPER**  
**DME - THIRD SEMESTER END EXAMINATION**  
**MANUFACTURING TECHNOLOGY- I (M-305)**

Time: 3 hours]

[ Total Marks : 80]

**PART-A**

**3x10=30**

**Instructions:** (1) Answer all questions.

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

(3) Answer should be brief and straight to the point and shall not exceed five simple

sentences.

2. State the working principle of lathe.
3. List out any six work holding devices used in lathe.
4. List out the different parts of a shaper.
5. How do you specify a slotter?
6. List out various types of hand-moulding tools.
7. Name any six types of patterns
8. List three relative merits of the cutting fluids and coolants.
9. What is the application of Enamel paints.
10. State the necessity of welding
11. Write any three differences between soldering and brazing.

#### **PART-B**

**10x5=50**

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

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

12. Describe the functions of lathe bed and lathe head stock with the help of sketch.
13. Explain any two methods of taper turning carried out on lathe machine.
14. Explain the whitworth quick return mechanism of a slotter with line diagram.
15. Describe the constructional details of planar with neat sketch?
16. Explain Centrifugal casting. Write the advantages and disadvantages and its applications.
17. Explain properties and applications of cutting fluids and coolants.
18. Explain the principle of operation arc welding with a neat sketch and write its advantages and applications.
19. Describe the procedure for submerged arc welding with a neat sketch. State its advantages.