

				Sub	ject	Cod	le: B	MF	403
Roll No:									

BTECH (SEM IV) THEORY EXAMINATION 2023-24 MANUFACTURING PROCESSES

TIME: 3 HRS M.MARKS: 70

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION: A

1. Attempt all questions in brief.

 $2 \times 7 = 14$

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Q. No.	Questions	Marks
a.	What do you understand by Manufacturing?	2
b.	Define allowance.	2
c.	What is rake angle?	2
d.	Define Tool life.	2
e.	What is glazing?	2
f.	What is HAZ in arc welding? D	2
g.	What do you mean by a Non-Traditional Manufacturing Process?	2

SECTION: B

2. Attempt any three of the following:

 $7 \times 3 = 21$

a.	Differentiate between drawing and deep drawing. Explain the	O 7
	various defects along with reasons that can occur while drawing.	
b.	What do you understand by Tool geometry? Explain the various	7
	angles along	
	with the designation of the given tool in terms of the ASA	
	reference system	
c.	What are the main differences between Cylindrical and centerless	7
	grinding	
d.	What are the specific advantages and disadvantages of resistance	7
	welding	
e.	Explain the working principle of EDM with a neat diagram. Also,	7
	write the advantages and disadvantages of EDM.	

SECTION: C

3. Attempt any *one* part of the following:

 $7 \times 1 = 7$

a.	What do you understand by powder metallurgy? What are the	7
	advantages and disadvantages of following also give some	
	applications of PM?	
b.	What do you understand by the Rolling process? Derive the	7
	expression for the Force, Work and Power during analysis of the	
	Rolling.	



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1	Attempt	any one	nart of t	he following:
4.	Attempt	any one	partort	ne ionowing:

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a.	What is Machining? Explain the various types of chip formation	7
	during the machining of a workpiece.	
b.	A single-point cutting tool with 12° rake angle is used to machine	7
	a steel workpiece. The depth of cut, i.e., uncut thickness is	
	0.81mm and the chip thickness under orthogonal machining	
	conditions is 1.8 mm. Find the shear angle.	

5. Attempt any one part of the following:

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/	Х	1	=	

a.	Explain the following in brief	7
	Lapping b) Honing	
b.	What are the wear mechanisms of the grinding wheel? Discuss in	7
	brief	

6. Attempt any *one* part of the following:

7	X	1	=	7

	and Julia Para and a same	
a.	Why sometimes welding joints fail during use? Give precautions to	7
	enhance the life of weld joints.	
b.	Discuss the TIG and MIG welding in detail with the help of neat	70
	and clean diagrams	1

7. Attempt any one part of the following:

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a.	What is Laser? Explain the Principle of LBM with a neat diagram.	7
b.	Explain the working principle of Abrasive JET Machining with a	7
	neat diagram. Why abrasive particles are not recycled in abrasive	
	jet machining? Explain in brief.	