Course outline

Week 1 - Basics of

casting process

Manufacturing Processes

Week 2 - Introduction to

Rate of solidification

Week 4 - Estimation of solidification time with

Week 5 - Machining

Week 6 - Cutting tool life

Week 7 - Introduction to Micro-Systems Fabrication

Week 8 - Abrasive water jet machining and Ultrasonic

Introduction of Additive

Machining Process

Introduction to Abrasive Jet

Ultrasonic Machining Process

Ultrasonic Machining Process

Effect of Process parameters

O Ultrasonic Machining Unit

Electrochemical Machining

Processes (ECM)

Ouiz: Assignment 8

Assignment 8 solution

Manufacturing Process

Week 9 - Introduction to Electrochemical Machining

Week 10 - Electro-discharge

Week 11 - Laser Beam and

Electron Beam Machining

Week 12 - Metal Forming

For Week 08

Machining Process

Processes

Processes

Text Transcripts

DOWNLOAD VIDEOS

Technology I and II: Feedback

O Determination of MRR of

Mechanics of Ultrasonic

Machining (USM)

of USM

Week 3 - Gating Systems and

different conditions and Riser

course work?

Week 0

design

Processes

estimation

Technology

Machining

Techniques

How does an NPTEL online



NPTEL » Manufacturing Process Technology I and II

Announcements

About the Course

Ask a Question

Progress Mentor

Unit 10 - Week 8 - Abrasive water jet machining and Ultrasonic Machining

The due date for submitting this assignment has a As per our records you have not submitted this as	
Assignment 8	
Which of the following is not true for ion m	illing?
Mean free path is comparable to chambe	
Highly anisotropic process.	
Olon impact energy is high.	
O Plasma is used to abrade the substrate by No, the answer is incorrect.	y sputtering.
Score: 0	
Accepted Answers: Highly anisotropic process.	
Which of the following is not true correspo	nding to thermal oxidation of silicon wafer?
In dry oxidation, pure oxygen reacts with	
In wet oxidation, water vapors react with	•
Silicon oxide cannot be deposited by the	CVD process.
All of the above statements are true.	
No, the answer is incorrect. Score: 0	
Accepted Answers: Silicon oxide cannot be deposited by the CVL	D process.
2) What is the machanism of material remove	al in A IM2
3) What is the mechanism of material remova	
-	to the impingement of fine abrasive particles.
 Material removal by thermal breakdown of Material removal by metal evaporation. 	
Material removal by vibrational tool impin	ging abrasive grains on the workpiece.
No, the answer is incorrect. Score: 0	
Accepted Answers: Material removal by a brittle fracture due to the	ne impingement of fine abrasive particles
waterial removal by a brittle fracture due to th	anpingoment of line abrasive particles.
4) What is the behavior of MRR in AJM with	respect to the mixing ratio?
It initially decreases and increases afterw	
 It remains constant irrespective of the mix It keeps increasing continuously. 	king ratio.
It initially increases and decreases afterw	ard.
No, the answer is incorrect.	
Score: 0 Accepted Answers:	
It initially increases and decreases afterward.	
5) During AJM, the mixing ratio used is 0.1. (qual to 15.	Calculate mass ratio if the ratio of the density of abrasive and density of carrier gas is
0.6	
0.4	
○ 0.3	
○ 0.8	
No, the answer is incorrect. Score: 0	
Accepted Answers: 0.6	
6) Which among the following is the preferred	d material for the nozzle in AJM?
Cropper	
Graphite	
Graphite Sapphire Gold No, the answer is incorrect.	
Graphite Sapphire Gold	
Graphite Sapphire Gold No, the answer is incorrect. Score: 0	
Graphite Sapphire Gold No, the answer is incorrect. Score: 0 Accepted Answers:	or the USM process?
Graphite Sapphire Gold No, the answer is incorrect. Score: 0 Accepted Answers: Sapphire	or the USM process?
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Graphite Sapphire Gold No, the answer is incorrect. Score: 0 Accepted Answers: Sapphire 7) What is the most important requirement for Tool must be ductile and tough. Continuous flow of abrasive slurry is a must be Preferred workpiece, in this case, is a harmonic continuous flow or abrasive slurry is a must be ductile.	ust requirement.
Graphite Sapphire Gold No, the answer is incorrect. Score: 0 Accepted Answers: Sapphire 7) What is the most important requirement for Tool must be ductile and tough. Continuous flow of abrasive slurry is a must be preferred workpiece, in this case, is a harm All of the above statements are true.	ust requirement.
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