

# Unit 6 - Week 4 : Conventional Abrasive Process and Surface Integrity in Abrasive Process

## Course outline

How does an NPTEL online course work?

Week 0: Prerequisite

Week 1: Introduction to Conventional Abrasive Processes

Week 2: Sustainable Grinding Process

Week 3: Honing, Lapping and Super Finishing.

Week 4 : Conventional Abrasive Process and Surface Integrity in Abrasive Process

Quiz : Assignment 4

Lec. 1: Vibratory Bowl Finishing, Rotary Barrel Finishing or Tumbling

Lec. 2: Drag Finishing, Ice-bonded Abrasive Finishing, Pitch Polishing, Pad Polishing

Lec. 3: Introduction to Surface Texture in Abrasive Process

Lec. 4: Representation of Surface Roughness

Feedback form

Solution : Assignment 4

Week 5 : Advanced Abrasive Machining Processes

Week 6 : Hybrid Abrasive Machining Processes

Week 7 : Advanced Abrasive Finishing Processes-1

Week 8 : Advanced Abrasive Finishing Processes-2

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## Assignment 4

The due date for submitting this assignment has passed.  
As per our records you have not submitted this assignment.

Due on 2020-02-26, 23:59 IST.

1) Which of the following media are used for finishing of HSS and Carbide tools in drag finishing process? 1 point

- a) SiZ & K granulates
- b) K & HSC granulates
- c) QZ & K granulates
- d) HSC & QZ granulates

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
b) K & HSC granulates

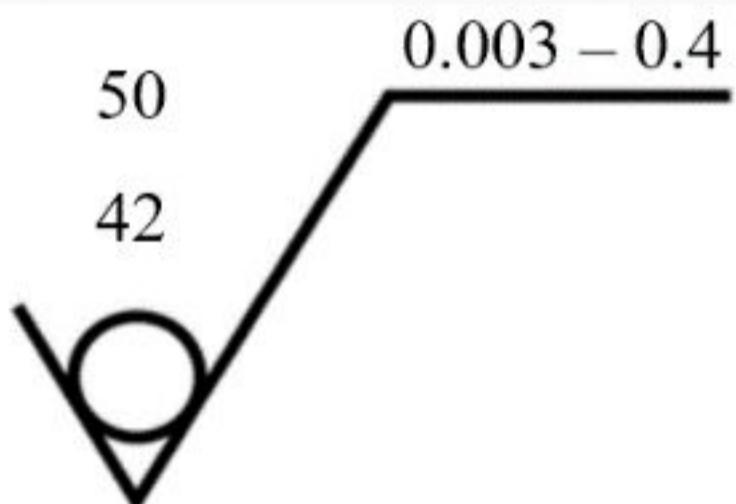
2) Which of the following mass finishing process gives faster and consistent surface roughness on component? 1 point

- a) Drag finishing
- b) Vibratory bowl finishing
- c) Centrifugal disk tumbling
- d) Centrifugal barrel tumbling

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
a) Drag finishing

3) Observe the following surface roughness representation and select the most suitable option 1 point



- a) The maximum waviness width is 0.4 cm
- b) The surface roughness should be achieved without any material removal process
- c) The maximum peak to valley height is 50 microns
- d) Both a and b

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
b) The surface roughness should be achieved without any material removal process

4) Which of the following material is not suggested to polish or finish by using Ice Bonded Abrasive Polishing technique? 1 point

- a) Copper
- b) Mild steel
- c) Stainless steel
- d) Aluminium

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
b) Mild steel

5) The temperature of the ice bonded abrasive polishing pad is maintained with the aid of 1 point

- a) Liquid ammonia
- b) Hydrogen
- c) Liquid Nitrogen
- d) Solid Carbon dioxide

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
c) Liquid Nitrogen

6) Which of the material based abrasive particles are used for deburring application in vibratory bowl finishing? 1 point

- a) Steel or Ceramic
- b) Plastic or Ceramic
- c) Plastic only
- d) All the above

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
d) All the above

7) The dominant wear mechanism present in vibratory bowl finishing process is 1 point

- a) 2 body abrasion
- b) 3 body abrasion
- c) Combination of 2 body and 3 body abrasion
- d) Neither a nor b

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
c) Combination of 2 body and 3 body abrasion

8) Which one of the following statements are correct regarding machining of two components with different machining techniques? 1 point

Statement – 1: If the two components have same average roughness (Ra), then the surface integrity may not be same.  
Statement – 2: If the two components have same average surface roughness (Sa), then their topography is same.

- a) Statement – 1 is correct and Statement – 2 is wrong
- b) Statement – 1 is wrong and Statement – 2 is correct
- c) Both the statements are right
- d) Both the statements are wrong

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
a) Statement – 1 is correct and Statement – 2 is wrong

9) The necessary condition to eliminate waviness from the surface roughness is 1 point

- a) Cutoff length should be higher than waviness wavelength
- b) Evaluation length should be lower than waviness wavelength
- c) Cutoff length should be lower than waviness wavelength
- d) Evaluation length should be higher than waviness wavelength

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
c) Cutoff length should be lower than waviness wavelength

10) Which of the following symbol indicates the lay direction in Superfinishing process? 1 point

- a) C
- b) x
- c) M
- d) ⊥

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
c) M