Unit 9 - Week 7 - Introduction to Micro-Systems Fabrication Technology

Assignment 7

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

Due on 2020-03-18, 23:59 IST.

Assignment 7

1) Precision machining caters what limit of machining accuracy? *1 point*

- 1-10 µm
- 0.1-1 µm
- 10-100 µm
- 1-10 nm

No, the answer is incorrect.
Score: 0
Accepted Answers:
0.1-1 µm

2) Ion beam machining can produce a minimum machining accuracy up to____? *1 point*

- 0.1 nm
- 1 µm
- 1 nm
- 100 µm

No, the answer is incorrect.
Score: 0
Accepted Answers:
1 nm

3) Which of the following mechanical abrasion process utilizes loose abrasives? *1 point*

- Honing
- Grinding
- Sawing
- Buffing

No, the answer is incorrect.
Score: 0
Accepted Answers:
Buffing

4) Which of the following device is used in AFM? *1 point*

- Electronic IC
- Cantilever tip
- DMD mirrors
- Smoothened silicon substrate

No, the answer is incorrect.
Score: 0
Accepted Answers:
Cantilever tip

5) Surface micromachining is: *1 point*

- Additive process
- Subtractive process
- Constant volume process
- None of the above.

No, the answer is incorrect.
Score: 0
Accepted Answers:
Additive process

6) Physical dry etching utilize which of the following etchant material? *1 point*

- Etchant gases
- Etchant powders
- Ions, electrons or photons
- All of the above.

No, the answer is incorrect.
Score: 0
Accepted Answers:
Ions, electrons or photons

7) Which of the following photoresist presents the feature of dissolving away when directly exposed by the UV light? *1 point*

- Negative photoresist
- Positive photoresist
- None of the above shows such characteristics.
- All the photoresists present such behavior.

No, the answer is incorrect.
Score: 0
Accepted Answers:
Positive photoresist

8) The resolution, b of lithography, is given by the formula____, where λ and s are wavelength and distance between mask and photoresist layer, respectively. *1 point*

- b=0.5λs
- b=0.5 (λs)^1.5
- b=1.5λs
- b=1.5 (λs)^0.5

No, the answer is incorrect.
Score: 0
Accepted Answers:
b=1.5 (λs)^0.5

9) SU8, negative tone photoresist does not contain which of the following compound? *1 point*

- Epoxy resin
- Curing agent
- Cyclopentanone solvent
- Photoacid generator

No, the answer is incorrect.
Score: 0
Accepted Answers:
Curing agent

10) Which of the following scheme is not used for a wafer-level bonding scheme? *1 point*

- Field assisted bonding
- Bonding by an intermediate adhesive layer
- Direct bonding by oxygen plasma
- All of the above.

No, the answer is incorrect.
Score: 0
Accepted Answers:
All of the above.