



Arab Academy for Science & Technology & Maritime Transport
College of Engineering & technology

Electronics & Communication Engineering Department

Course: MEMS

Course Code: EC 530

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MCQ set#3:Si Microfabrication

Choose the most proper answer:

1. Semiconductors may occur in.....

- a) Amorphous forms
- b) Crystalline forms
- c) Homogeneous forms
- d) a&b

3. Silicon is strongly associated with MEMS because:

- a) Well understood and controllable electrical properties
- b) Economical to produce multi crystal substrate
- c) Limited knowledge of the material existing
- d) None of the above

5. Semiconductor ingots are prepared using method:

- a) Crystalline
- b) Czochralski
- c) Polycrystalline
- d) Amorphous

7. One of the following is used for the deposition of electrical conductors on a substrate, like aluminum, chromium, nickel:

- a) Thermal deposition
- b) Physical layer deposition
- c) Chemical layer deposition
- d) None of the above

9. Layer techniques method is/are:

- a) Thin film techniques
- b) Thick film techniques
- c) a & b
- d) None of the above

11. are used also in Micromachining :

- a) Plastics
- b) Rubber
- c) Glasses and metals
- d) Fabrics

13. Each cubic meter of ordinary room air has several million particles with a size of :

- a) 0.1 Microns
- b) 12 Microns
- c) 20 Microns
- d) Non of the above

15. Oxidation of silicon is a type of.....

- a) Thermal deposition
- b) Physical layer deposition
- c) Chemical layer deposition
- d) Deposition for a liquid phase.

2. The great advantage of semiconductors is:

- a) Its conductivity can be varied
- b) Its size can be varied
- c) Its admittance can be varied
- d) Its strength can be varied

4. crystalline semiconductor is used also as substrate:

- a) Germanium
- b) magnesium
- c) SiO₂
- d) GaAs

6. Ion implantation is done by:

- a) Firing atoms directly into substrate
- b) Introducing impurities on substrates surface
- c) Heating two substrates together
- d) All of the above

8. Diffusion used more than ion implantation because it is.....

- a) Highly accurate.
- b) Doesn't require masking.
- c) Inexpensive.
- d) None of the above.

10. Thick film technique is used for the production of :

- a) cassette tapes
- b) graphics and text onto items
- c) thick film papers
- d) DNA test sheets

12. Physical layer deposition is a type of.....

- a) Thick film techniques
- b) Deposition from a liquid phase
- c) Thin film techniques
- d) Masking

14. Typical range of thickness for thick-film layer is.....:

- a) 10 - 100 mm.
- b) 0.1 - 100 micro meters.
- c) 100 - 1000 mm.
- d) 100 - 1000 micro meter.

16. The choice of the mask material depends on the.....

- a) Resolution
- b) Conductivity.
- c) Flexibility.
- d) No. of free electrons in it.