

PIC Course
Assignment -4

1. The following material is commonly used for MOEMS
 - a. Silicon
 - b. Glass
 - c. Lithium niobate
 - d. GaAs
2. A graded index waveguide is formed by
 - a. Proton exchange in Lithium Niobate
 - b. Silver diffusion in Glass
 - c. Epitaxial growth on to GaAs substrate
 - d. Polymer deposition on any substrate
3. Coating of negative photo resist can be used to realise a pattern on the substrate
 - a. That is different than the mask pattern
 - b. That is same as the mask pattern
 - c. That depends on the UV light used
 - d. That is independent of UV light used
4. Compared to Photo lithography, Electron beam lithography results in
 - a. Higher resolution
 - b. Lower resolution
 - c. Same resolution
 - d. Resolution that depends on the electron energy
5. The distance between the resonant peaks of a ring resonator is called
 - a. Q-factor
 - b. FSR
 - c. FWHM
 - d. Bandwidth
6. In order to benefit from maximum refractive index change, the optical waveguide has to be placed on a MEMS cantilever beam
 - a. At freely suspended end
 - b. In the middle
 - c. At the base
 - d. Anywhere is fine.
7. The line defect of a photonic bandgap structure acts as a
 - a. Waveguide
 - b. Resonator
 - c. Absorber
 - d. Grating
8. The suitable material to integrate a source and a modulator is
 - a. Glass
 - b. InP
 - c. Silicon
 - d. Lithium Niobate

9. Surface plasmon resonance is achieved at an interface between
 - a. Metal and dielectric
 - b. Metal and metal
 - c. Dielectric and dielectric
 - d. Two liquids

10. A bio material used as cladding layer on an optical waveguide
 - a. Changes the propagating light frequency
 - b. Changes the effective index of the waveguide
 - c. Shifts the operating wavelength
 - d. makes the waveguide multimode