

PIC Course
Assignment -3

1. The angle of an integrated optic Y-branch is designed to be small to avoid
 - a. Guided mode losses
 - b. Radiation mode losses
 - c. Substrate mode losses
 - d. Cladding mode
2. The operation of an RF spectrum analyser is based on
 - a. Electro-optic effect
 - b. Magneto-optic effect
 - c. Acousto-optic effect
 - d. Thermo-optic effect
3. In a 4 x 4 Electro-optic switch is configured using five 2x2 EO switches. A pass through state is defined as 1-1, 2-2,3-3,4-4.
 - a. Any input output combination is possible.
 - b. All input output combinations are not possible.
 - c. Pass through state is possible (1-1, 2-2,3-3,4-4)
 - d. Reversal state is possible (1-4,2-3,3-2, 4-1)
4. The refractive index change due to electro-optic effect varies
 - a. Directly with electrode voltage and inversely with electrode gap
 - b. Inversely with electrode voltage and directly with electrode gap
 - c. Directly with both electrode voltage and electrode gap
 - d. Inversely with both electrode voltage and electrode gap
5. A SAW IDT can create the following IO device
 - a. Tapered waveguide
 - b. Grating
 - c. Y-branch
 - d. Directional coupler
6. The special frequency components of a beam input to an integrated optic waveguide can be interpreted as rays with
 - a. Different angles
 - b. Wavelengths
 - c. Velocities
 - d. Phases
7. A ridge tapered optical waveguide has refractive index varying along
 - a. Width only
 - b. Depth only
 - c. Propagation direction
 - d. Width as well as depth
8. The angle of an IO Y-branch is designed to be small to
 - a. reduce radiation losses
 - b. reduce absorption losses
 - c. maintain single mode operation
 - d. avoid coupling between output ports

9. The following effect creates waveguide grating
 - a. non-linear effect
 - b. Electro-optic effect
 - c. Acousto-optic effect
 - d. Thermo optic effect

10. A fiber optic gyroscope used the following interferometer
 - a. Sagnac interferometer
 - b. Mach Zhender interferometer
 - c. Michelson interferometer
 - d. Fizeau interferometer