## NAT I Engineering Physics

| Sr | Questions | Answers Choice |
|---|---|---|
| 1 | The twinkling of stars is due to | A. The fact that stars do not emit light continuously<br>B. The refractive index of the earth's atmosphere fluctuate<br>C. Intermittent absorption of star light by its own atmosphere<br>D. None of them |
| 2 | A prism splits a beam of white light into its seven constituent colors this is so because | A. Phase of different colors is different<br>B. Amplitude of different colors is different<br>C. Energy of different colors is different<br>D. Velocity of different colors is different |
| 3 | A sun rise or sun set, the sun looks reddish because. | A. The sun is coldest at these times<br>B. Of the effects of reflection and refraction<br>C. The sun is hottest at these times<br>D. Of the scattering of light |
| 4 | One cannot see through fog because | A. Fog absorbs light<br>B. The refractive index of fog is infinity<br>C. Light suffers total reflection at the droplet in a fog<br>D. Light is scattered by the droplets in fog |
| 5 | The distance between node and anti-node is | A. $\lambda$<br>B. $\lambda/2$<br>C. $\lambda/4$<br>D. $2\lambda$ |
| 6 | Mechanical waves on the surface of a liquid are | A. Transverse<br>B. Longitudinal<br>C. Torsional<br>D. Both transverse and longitudinal |
| 7 | Velocity of sound in a diatomic as is 300 m/sec what is its rms velocity | A. 400 m/sec<br>B. 40 m/sec<br>C. 430 m/sec<br>D. 300 m/sec |
| 8 | At a certain instant a stationary transverse wave is found to have maximum kinetic energy the appearance of string of that instant is: | A. Sinusoidal shape with amplitude A/3<br>B. Sinusoidal shape with amplitude A/2<br>C. Sinusoidal shape with amplitude A<br>D. Straight line |
| 9 | With the propagation of a longitudinal wave through a material medium the quantities transmitted in the propagation direction are | A. Energy momentum and mass<br>B. Energy<br>C. Energy and mass<br>D. Energy and linear momentum |
| 10 | If the amplitude of sound is doubled and the frequency reduced to one-fourth the intensity of sound at the same point will be | A. Increasing by a factor of 2<br>B. Decreasing by a factor of 2<br>C. Decreasing by a factor of 4<br>D. Unchanged |