## NAT I Medical Physics

| Sr | Questions | Answers Choice |
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| 1 | Copper and germanium are cooled to 70 K from room temperature then | A. Resistance of copper increases while that of germanium decreases<br>B. Resistance of copper decreases while that of germanium increases<br>C. Resistance of both decreases<br>D. Resistance of both increases |
| 2 | The number of translation degrees of freedom for a diatomic gas is | A. 2<br>B. 3<br>C. 5<br>D. 6 |
| 3 | A photocell with a constant p.d of V volt across it illuminated by a point source from a distance of 25 cm. When the source is moved to a distance of 1 m, the electrons emitted by the photocell | A. Carry 1/4th their previous energy<br>B. Are 1/6th as numerous as before<br>C. Are 1/4th as numerous as before<br>D. Carry 1/4th their previous momentum |
| 4 | In which region of electromagnetic spectrum does the Lyman series of hydrogen atom lie | A. Ultraviolet<br>B. Infra red<br>C. Visible<br>D. X-ray |
| 5 | Center of mass is a point | A. Which is geometric center of a body<br>B. From which distance of particles are same<br>C. Where the whole mass of the body is supposed to be centered<br>D. Which is the origin of reference frame |
| 6 | Light appears to travel in straight lines since | A. It is not absorbed by the atmosphere<br>B. It is reflected by the atmosphere<br>C. Its wavelength is very small<br>D. Its velocity is very large |
| 7 | There are discrete energy levels in atoms. It was first experimentally demonstrated by | A. Rutherford's experiment<br>B. Frank Hertz experiment<br>C. Marsden's experiment<br>D. Sommerfield experiment |
| 8 | The average binding energy of a nucleon inside an atomic nucleus is about | A.  8 MeV<br>B. 8 eV<br>C. 8 Joules<br>D. 8 ergs |
| 9 | 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 |
| 10 | A photoelectric cell converts | A. Electrical energy to light energy<br>B. Light energy to light energy<br>C. Light energy to electrical energy<br>D. Light energy to elastic energy |
| 11 | If the period of oscillation of mass (M) suspended from a spring is 2s, then the period of mass 4M will be | A. 1 s<br>B. 2 s<br>C. 3 s<br>D. 4 s |
| 12 | The modulus of rigidity of a liquid is | A. Zero<br>B. 1<br>C. Infinity<br>D. A value not one of those mentioned above |
| 13 | Band spectrum in produced by | A. H<br>B. He<br>C. $H_2$<br>D. N |

D. Na

| 14 | A pendulum clock set to give correct time in Karachi is taken to Quetta it would give correct time if | A. The mass of the pendulum is increased<br>B. The mass of the pendulum is decreased<br>C. The length of the pendulum os increased<br>D. The length of the pendulum is decreased |
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| 15 | When boron is added as an impurity to silicon the resulting material is | A. n type conductor<br>B. n type semiconductor<br>C. p-type conductor<br>D. p-type semiconductor |
| 16 | Ball pen function on the principle of | A. Viscosity<br>B. Boyle's law<br>C. Gravitational force<br>D. Surface tension |
| 17 | If in a moving coil galvanometer a current 1 produces a deflection $\theta$ then | A. $i \propto \tan \theta$<br>B. $i \propto \theta^2$<br>C. $i \propto \theta$<br>D. $i \propto \sqrt{\theta}$ |
| 18 | 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 |
| 19 | Which of the modulus of elasticity is involved in compressing a rod to decrease its length? | A. Young's modulus<br>B. Bulk modulus<br>C. Modulus of rigidity<br>D. None of the above |
| 20 | If yellow light emitted by sodium lamp in Young's double slit experiment is replaced by monochromatic blue light of the same intensity | A. Fringe width will decrease<br>B. Fringe width will increase<br>C. The fringe width will remain unchanged<br>D. Fringes will become less intense |