NAT I Engineering Physics

Sr	Questions	Answers Choice
1	When boron is added as an impurity to silicon the resulting material is	A. n type conductor B. n type semiconductor C. p-type conductor D. p-type semiconductor
2	The temperature at which the speed of sound becomes double as was at 27°C is	A. 273°C B. 0°C C. 927°C D. 1027°C
3	A piece of fuse wire melts when a current of 15 ampere flows through it.With this current, if it dissipates 22.5 W. the resistance of fuse wire will be	A. Zero B. 10 Ω C. 1 Ω D. 0.10 Ω
4	The mass defect for the nucleus of helium is 0.0303 a.m.u What is the binding energy per nucleon for helium in MeV?	A. 28 B. 7 C. 4 D. 1
5	For obtaining appreciable extension the wire should be	A. Short and thin B. Long and thin C. Short and tick D. Long and thick
6	The sieman is the SI unit of	A. Resistance B. Specific Resistance C. Conductance D. Inductance
7	Copper and germanium are cooled to 70 K from room temperature then	A. Resistance of copper increases while that of germanium decreases B. Resistance of copper decreases while that of germanium increases C. Resistance of both decreases D. Resistance of both increases
8	Which of the following four statements is false?	A. A body can have zero velocity and still be accelerated B. A body can have a constant velocity and still have a varying speed C. A body can have a constant speed and still have a varying velocity D. The direction of the velocity of a acceleration is constant
9	The number of translation degrees of freedom for a diatomic gas is	A. 2 B. 3 C. 5 D. 6
10	The conductivity of a superconductor is	A. Infinite B. Very large C. Very small D. Zero
11	Ball pen function on the principle of	A. Viscosity B. Boyle's law C. Gravitational force D. Surface tension
12	According to the Hooke's law the force required to change the length of a wire by '1' is proportional to	A. 1⁻² B. 1⁻¹ C. 1 D. 1²
		A. [ML²T²] B. [MLT²] C. <span style="font-size:

13	The dimensional formula of toque is:	14.44444465637207px;">[ML ⁻¹<span style="font-size: 14.44444465637207px;">T ⁻²<span style="font-size: 14.44444465637207px;">] D. <span style="font-size: 14.44444465637207px;">[ML ⁻²<span style="font-size: 14.44444465637207px;">T ⁻²<span style="font-size: 14.44444465637207px;">]
14	What will be the ratio of the distance moved by a freely falling body from rest in 4th and 5th seconds of journey?	A. 4 : 5 B. 7 : 9 C. 16 : 25 D. 1 : 1
15	A (100 W, 200 V) bulb is connected to a 160 V power supply. The power consumption would be	A. 64 W B. 80 W C. 100 W D. 125 W
16	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 B. 2 s C. 3 s D. 4 s
17	Which of the following is a scalar quantity	A. Density B. Displacement C. Torque D. Weight
18	The peak voltage in a 200 volt A.C supply is nearly	A. 220 B. 253 C. 311
19	Two sources of sound are said to be coherent if	A. They produce sounds of equal intensity B. They produce sounds of equal frequency C. They produce sound waves vibrating with the same phase D. They produce sound waves with zero or constant phase difference all instant of time
20	Velocity of sound in a diatomic as is 300 m/sec what is its rms velocity	A. 400 m/sec B. 40 m/sec C. 430 m/sec D. 300 m/sec