NAT II Physical Science Physics

Sr	Questions	Answers Choice
1	For obtaining appreciable extension, the wire should be	A. Short and thin B. Long and thin C. Short and thick D. Long and thick
2	A wire is stretched to double of its length. The strain is	A. 2 B. 1 C. zero D. 0.5
3	A prism splits a beam of white light into its seven constituent colors. This is so because	A. Phase of different colors is different B. Amplitude of different colors is different C. Energy of different colors is different D. Velocity of different colors is different
4	For production of beats the two sources must have	A. Different frequencies and same amplitude B. Different frequencies C. Different frequencies, same amplitude and same phase D. Different frequencies and same phase
5	A wire of radius r has resistance R, It it is stretched to a wire of r/2 radius, then the resistance becomes	A. 2R B. 4R C. 16R D. Zero
6	A monochromatic source of light is placed at a large distance d from a metal surface. Photoelectrons are ejected at rate n, kinetic energy being E. If the source is brought nearer to distance d/2, the rate and kinetic energy per photoelectron become nearly	A. 2n and 2E B. 4n and 4E C. 4n and E D. N and 4E
7	What remains constant in the field of central force?	A. Potential energy B. Kinetic energy C. Angular momentum D. Linear momentum
8	The contrast in the fringes in any interference pattern depends on	A. Fringe width B. Intensity ratio of the sources C. Distance between the slits D. Wavelength
9	When a hydrogen atom is bombarded, the atom is excited to the n = 4 state of hydrogen atom. The energy released when the atom falls from n = 4 state to the ground state is	A. 1.275 eV B. 12.75 eV C. 5 eV D. 8 eV
10	When we apply reverse bias to a junction diode, it	A. Lowers the potential barrier B. Raise the potential barrier C. Increase the majority carrier current D. Increase the minority carrier current
11	The product of the pressure and volume of an ideal gas is	A. A constant B. Approximately equal to the universal gas constant C. Directly proportional to its temperature D. Inversely proportional to its temperature
12	The motion without consideration of its cause is studied in	A. Kinematics B. Mechanics C. Statics D. Modern Physics
13	The frequency of the incident light falling on a photosensitive metal plate is doubled, the kinetic energy of the emitted photoelectrons is	A. Double the earlier value B. Unchanged C. More than doubled

		D. Less than doubled
14	The length of a telescope is 36 cm. The focal lengths of its lenses can be	A. 30 cm, 6 cm B. -30 cm, -6 cm C. 30 cm, -6cm D. -30cm, 6cm
15	Which one of the following phenomena is not explained by Huygen's construction of wavefront?	A. Refraction B. Reflection C. Diffraction D. Origin of spectra
16	The sum of the magnitude of two forces acting at a point is 18 and the magnitude of their resultant is 12. If the resultant is at 90°with the force of the smaller magnitude, then their magnitudes are:	A. 3, 15 B. 4, 14 C. 5, 13 D. 6, 12
17	A man pushes a wall but fails to displace it. He does:	A. Negative work B. Maximum positive work C. Positive work but not maximum D. No work
18	In Which case does the potential energy decreases?	A. On compressing a spring B. On stretching a spring C. One moving a body against gravitational force D. One the rising of an air bubble in water
19	A motorist travels A to B at a speed at 40 km/h and returns at speed of 60 km/h. His average speed will be	A. 40 km/h B. 48 km/h C. 50 km/h D. 60 km/h
20	In a common base transistor circuit, the current gain is 0.98. On changing the emitter current by 5.00 mA, the change in collector current is	A. 0.916 mA B. 2.45 mA C. 4.9 mA D. 5.1 mA