NAT II Physical Science Physics

Sr	Questions	Answers Choice
1	A sun rise or sun set, the sun looks reddish because:	A. The sun is coldest at these times B. Of the effects of reflection and refraction C. The sun is hottest at these times D. Of the scattering of light
2	Who explained the origin of the Fraunhoffer lines?	A. Fraunhoffer B. Kirchhoff C. Fresnel D. Snell
3	If tube length of astronomical telescope is 105 cm and magnifying power is 20 for normal setting. Calculate the focal length of objective	A. 100 cm B. 10 cm C. 20 cm D. 25 cm
4	A train of 150 m length is going towards north direction at a speed of 10 ms^{-1}. A parrot flies at a speed of 5 ms^{-1}towards south direction parallel to the railway track. The time taken by the parrot to cross the train is equal to	A. 12 s B. 8 s C. 15 s D. 10 s
5	Which of the modulus of elasticity is involved in compression a rod to decrease its length?	A. Young's modulus B. Bulk modulus C. Modulus of rigidity D. None of the above
6	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
7	The unit of inductance is equivalent to	A. V x s/A B. V x A/s C. A x s/v D. V/A x s
8	The initial velocity of a body moving along a straight line in 7 m/s. It has a uniform acceleration of 4 m/s^2. The distance covered by the body in the 5th second of its motion is	A. 25 m B. 35 m C. 50 m D. 85 m
9	The mass of a proton is 1847 times that of an electron. An electron and a proton are projected into a uniform electric field in a direction at right angles to the direction of the field with the same initial kinetic energy.The	A. Both the trajectories will be equally curved B. The proton trajectory will be less curved than the electron trajectory C. The electron trajectory will be less curved than the proton trajectory D. The relative curving of the trajectories will be dependent on the value of the initial kinetic energy
10	Steel is preferred for making springs over copper. Why?	A. Steel is cheaper B. Young's modulus of steel is more than that of copper C. Young's modulus of copper is more than that of steel D. Steel is less likely ot be oxidized
11	A cable breaks if stretched by more than 2 mm. It is cut into two equal parts. How much either part can be stretched without breaking?	A. 0.25 m B. 0.5 m C. 1 mm D. 2 mm
12	A moving charge will gain energy due to the application of	A. Electric field B. Magnetic field C. Both of these D. None of these
13	In case of p-n junction diode, at high value of reverse bias, the current rises sharply. The value of reverse bias is known as:	A. Cut off voltage B. Zener voltage C. Inverse voltage D. Critical voltage
14	What will be the ratio of the distance moved by a freely falling body from rest in 4th and 5th	A. 4 : 5 B. 7 : 9

	seconds of journey?	C. 16 : 25 D. 1 : 1
15	According to the Hooke's law the force required to change the length of a wire by 'l' is proportional to	A. l⁻² B. l⁻¹ C. l D. l²
16	The unit of electric current 'ampere' is the amount of current flowing through each of two parallel wires 1 m apart and of infinite length will give rise to a force between them equal to	A. 1 N/m B. 2 x 10⁻⁷N/m C. 1 x 10⁻²N/m D. 4 x 10²N/m
17	A bullet is shot from a rifle. As a result the rifle recoils. The kinetic energy of rifle as compared to that of bullet is	A. Less B. Greater C. Equal D. Cannot be concluded
18	Bernoulli's equation is based upon law of conservation	A. Mass B. Momentum C. Energy D. None of these
19	The part of a transistor which is heavily doped to produce large number of majority carriers is	A. Emitter B. Base C. Collector D. Any of the above depending on nature of transistor
20	Shunt required in an ammeter of resistance R to decrease its deflection from 30 ampere to 10 ampere is	A. R/4 B. R/3 C. R/2 D. R