NAT I Computer Science Physics

Sr	Questions	Answers Choice
1	To get a resultant displacement of 10 m, two displacement vectors of magnitude 6 m and 8 m should be combined	A. Parallel B. Antiparallel C. At angle 60° D. Perpendicular to each other
2	A person standing on a rotating platform has his hands lowered He suddenly outstretches his arms.The angular momentum	A. Becomes zero B. Increases C. Decreases D. Remains the same
3	Two bodies of masses m_1 and m_2 have equal momentum their kinetic energies E_1 and E_2 are in the ratio	A. √m₁ : √m₂ B. m ₁: m ₂ C. m ₂: m ₁ D. m ₁ ² : m ₂²
4	The essential distinction between X-rays and y-rays is that	A. y-rays have smaller wavelength than X-rays B. y-rays emanate from nucleus while X-rays emanate from outer part of the atom C. y-rays have greater ionizing power than X-rays D. y-rays are more penetrating than X-rays
5	The primary winding of transformer has 500 turns whereas its secondary has 5000 turns The primary is connected to an a.c supply of 20 V, 50 Hz The secondary will have an output of	A. 200 V, 50 Hz B. 2 V, 50 Hz C. 200 V, 500 Hz
6	The twinkling of stars is due to	A. The fact that stars do not emit light continuously B. The refractive index of the earth's atmosphere fluctuate C. Intermittent absorption of star light by its own atmosphere D. None of them
7	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
8	The dimensional formula for the modulus of elasticity is same as that for.	A. Stress B. Strain C. Velocity D. Surface tension
9	If in a moving coil galvanometer a current 1 produces a deflection θ then	A. i ∞ tan θ B. i ∞ θ² C. i ∞ θ D. i ∞ √θ
10	If the dot product of two non-zero vectors vanishes the vectors will be	A. In the same direction B. Opposite to each other C. Perpendicular to each other D. Zero
		A. λ

11	The distance between node and anti-node is	B. λ/2 C. λ/4 D. 2λ
12	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
13	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
14	A moving charge will gain energy due to the application of	A. Electric field B. Magnetic C. Both of these D. None of these
15	A ten-ohm electric heater operates on a 110 V line Calculate the rate at which it develops heat in watts:	A. 1310 W B. 670 W C. 810 W D. 1210 W
16	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.
17	The volt/metre is the unit of:	A. Potential B. Work C. Force D. Electric field intensity
18	Two forces of 10N and 15N are acting simultaneously on an object in the same direction. Their resultant is	A. Zero B. 5N C. 25N D. 150N
19	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 magnitude are:	A. 3, 15 B. 4, 14 C. 5, 13 D. 6, 12
20	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