NAT II Physical Science Physics

Sr	Questions	Answers Choice
1	A voltmeter has resistance of 2000 ohms and it can measure up to 2V. If we want to increase its range to 10V then required resistance in series will be	A. 2000 ohm B. 4000 ohm C. 6000 ohm D. 8000 ohm
2	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
3	A couple produces	A. Purely linear motion B. Purely rotational motion C. Linear and rotational motion D. No motion
4	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
5	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
6	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 B. Fringe width will increase C. The fringe width will remain unchanged D. Fringes will becomes less intense
7	In an A.C. circuit, a resistance of R ohm is connected in series with an inductance L. If phase angle between voltage and current be 45°, the value of inductive reactance will be	A. R/4 B. R/2 C. R D. Cannot be found with the given data
8	Which one of the following is a simple harmonic motion?	A. Wave moving through a string fixed at both ends B. Earth spinning about its own axis C. Ball bouncing between two rigid vertical walls D. Particle moving in a circle with uniform speed
9	Two electric bulbs of 200 W and 100 W have same voltage. If $R_1$and R_2be their resistance respectively then	A. R₁=2R₂ B. R₂=2R₁ C. R₂=4R₁ D. R₁=4R₂
10	The time period of a simple pendulum is 2 seconds. If its length is increased by 4 times, then its period becomes	A. 16 s B. 12 s C. 8 s D. 4 s
11	The average binding energy of a nucleus inside an atomic nucleus is about	A. 8 MeV B. 8 eV C. 8 Joules D. 8 ergs
12	A particle is moving in a uniform magnetic filed, then	A. its momentum changes but total energy remains the same B. Both momentum and total energy remains the same C. Both changes D. Total energy change but momentum remains
13	What remains constant when the earth revolves around the sun?	A. Angular momentum B. Linear momentum C. Angular kinetic energy D. Linear kinetic energy

14	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
15	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
16	Surface tension of water is due to	A. Inter molecular attractions B. Intermolecular spaces C. Inter molecular repulsion D. None of above
17	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
18	The fundamental unit which has same power in the dimensional formula of surface tension and viscosity is:	A. Mass B. Length C. Time D. None
19	According to Stoke's law, drag force depends on	A. Initial velocity B. Final velocity C. Terminal velocity D. Instantaneous velocity
20	At constant volume temperature is increased. Then	A. Collision on walls will be less B. Number of collisions per unit time will increase C. Collisions will be in straight lines D. Collisions will not change