

NAT II Physical Science Physics

Sr	Questions	Answers Choice
1	The nucleus 6C12 absorbs an energetic neutron and emits a beta particle (β). The resulting nucleus is	A. ₇ N ¹⁴ B. ₅ B ¹³ C. ₇ N ¹³ D. ₆ C ¹³
2	A fly is sitting on the objective of a telescope pointed towards the moon. What effect is expected on the photography of the moon taken through the telescope?	A. The entire of view blocked B. There is an image of the fly on the photography C. There is no effect at all D. There is a reduction in the intensity of the image
3	The volt/metre is the unit of:	A. Potential B. Work C. Force D. Electric field intensity
4	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
5	Absolute temperature can be calculated by	A. Mean square velocity B. Motion of the molecule C. Both A and B D. None of these
6	A person standing near the track of a fast moving train has tendency to fall towards it because of	A. Vibration due to motion of train B. Gravitation force of attraction between person and trains C. The high speed of train D. Some other effect
7	A capacitor acts as an infinite resistance for	A. AC B. DC C. Both AC and DC D. Neither AC nor DC
8	The conductivity of a superconductor is	A. Infinite B. Very large C. Very small D. Zero
9	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
10	A photocell with a constant p.d. of V volt across it illuminated by a point source from a distance of 25 cm. When the source is moved to a distance of 1m, the electrons emitted by the photocell	A. Carry 1/4th their previous energy B. Are 1/16th as numerous as before C. Are 1/4th as numerous as before D. Carry 1/4th their previous momentum
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	Blood has a density	A. Equal to water B. Greater then water C. Lesser then water D. None of these
13	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

14	The magnetic moment of a circular coil carrying current is	A. Directly proportional to the length of the wire in the coil B. Inversely proportional to the length of the wire in the coil C. Directly proportional to the square of the length of the wire in the coil D. Inversely proportional to the square of the length of the wire in the coil
15	In a simple harmonic motion (SHM), which of the following does not hold?	A. To force on the particle is maximum at the ends B. The acceleration in minimum at the mean position C. The potential energy is maximum at the mean position D. The kinetic energy is maximum at the mean position
16	The dot product of two vectors is negative when	A. They are parallel vectorsB. They are anti-parallel vectorsC. They are perpendicular vectorsD. None of the above is correct
17	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
18	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
19	The essential distinction between X-rays andγ-rays is that	A. γ-rays have smaller wavelength than X-rays B. γ-rays emanate from nucleus while X-rays emanate from outer part of the atom C. γ-rays have greater ionizing power than X-rays D. γ-rays are more penetrating than X-rays
20	In a Millikan's oil drop experiment the charge on an oil drop is calculated to be 6.35×10^{-19} C. The number of excess electrons on the drop is	A. 3.9 B. 4 C. 4.2 D. 6