

## NAT II Physical Science Physics

Sr	Questions	Answers Choice
1	The structure of solids is investigated by using	A. Cosmic Rays B. X-rays C. Intra red Radiation D. <span style="color: rgb(34, 34, 34); font-family: arial, sans-serif; font-size: small;">γ-rays</span>
2	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
3	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
4	A couple produces	A. Purely linear motion B. Purely rotational motion C. Linear and rotational motion D. No motion
5	The half-life of a radio-isotope is 5 years. The fraction of atoms decayed in this substance after 15 years will be	A. 1 B. 3/4 C. 7/8 D. 5/8
6	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
7	The dimensional formula of torque is:	A. $[ML^2T^{-2}]$ B. $\{MLT^{-2}\}$ C. $[ML^{-1}T^{-2}]$ D. $[ML^{-2}T^{-2}]$
8	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
9	In a Millikan's oil drop experiment the charge on an oil drop is calculated to be $6.35 \times 10^{-19}C$ . The number of excess electrons on the drop is	A. 3.9 B. 4 C. 4.2 D. 6
10	The dimensional formula for the modulus of elasticity is same as that for:	A. Stress B. Strain C. Velocity D. Surface tension
11	A particle moving in a magnetic field has increase in its velocity, then its radius of the circle	A. Decreases B. Increases C. Remains the same D. Becomes half
12	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
13	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
14	A point charge Q is placed at the mid-point of a line joining two charges, 4q and q. If the net force on charge q is zero, then Q must be equal to	A. -q B. +q C. -2q D. -

		D. +4q
15	A force of 10N is acting along y-axis. Its component along x-axis is	A. 10N B. 20N C. 100N D. Zero N
16	If the amplitude of sound is doubled and the frequency reduced to one-fourth, the intensity of sound at the same point will be	A. Increasing by a factor of 2 B. Decreasing by a factor of 2 C. Decreasing by a factor of 4 D. Unchanged
17	The volt/metre is the unit of:	A. Potential B. Work C. Force D. Electric field intensity
18	When the length of a microscope tube increase, its magnifying power	A. Decreases B. Increases C. Does not Change D. May increase or decrease depending on the observer and the place of observation
19	The essential distinction between X-rays and $\gamma$ -rays is that	A. $\gamma$ -rays have smaller wavelength than X-rays B. $\gamma$ -rays emanate from nucleus while X-rays emanate from outer part of the atom C. $\gamma$ -rays have greater ionizing power than X-rays D. $\gamma$ -rays are more penetrating than X-rays
20	When sound waves travel from air to water which of these remains constant?	A. Velocity B. Frequency C. Wavelength D. All the above