

eExam Question Bank

Coursecode:

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<input type="checkbox"/>	Question Type	Question	A	B	C	D	Answer	Remark
<input type="checkbox"/>	FBQ	Polarization experiments provide proof that electromagnetic waves are <input type="text"/> waves.	transverse	transverse				<input type="button" value="eExam"/>
<input type="checkbox"/>	FBQ	<input type="text"/> diffraction phenomena are observed when the source and the screen for observing the diffraction pattern are at finite distance from the diffracting aperture or the obstacle.	Fresnel	Fresnel				<input type="button" value="eExam"/>
<input type="checkbox"/>	FBQ	<input type="text"/> diffraction phenomena are observed when the source and the screen are at infinite distance from the aperture causing the diffraction.	Fraunhofer	Fraunhofer				<input type="button" value="eExam"/>
<input type="checkbox"/>	FBQ	The distance between any two adjacent maxima or minima in an interference pattern is given by $\beta = \frac{D\lambda}{d}$ . The quantity $\beta$ is called the <input type="text"/> width	fringe	fringe				<input type="button" value="eExam"/>
<input type="checkbox"/>	FBQ	For Young's double-slit experiment, we can write the formula $\frac{\phi}{2\pi} = \frac{\Delta x}{\lambda}$ . $\Delta x$ is the <input type="text"/>	path difference	path difference				<input type="button" value="eExam"/>

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<input type="checkbox"/>	FBQ	Waves emitted from two sources are said to be <input type="text"/> if they have zero or constant difference of phase	coherent	coherent					eExam
<input type="checkbox"/>	FBQ	The change in frequency and therefore the pitch of sound as persived by a listner in relative motion to the source of the sound is known as <input type="text"/>	Doppler effect	Doppler effect					eExam
<input type="checkbox"/>	FBQ	The ratio of the vecocities and wavelengths of a wave as it traverses two media with different properties is called <input type="text"/>	refraction	refraction					eExam
<input type="checkbox"/>	FBQ	The phenomenon of the spreading or bending of a wave around an aperture of comparable dimensions with the wavelength of the wave is known as <input type="text"/>	diffraction	diffraction					eExam
<input type="checkbox"/>	FBQ	<input type="text"/> _'s principle states that a point on a wavefront is a source of secondary wavelets	Huygen	Huygen					eExam
<input type="checkbox"/>	FBQ	The ratio of the applied force to the amplitude of particle velocity for transverse waves in terms of tension in a string is called the characteristic <input type="text"/>	impedance	impedance					eExam
<input type="checkbox"/>	FBQ	When a wave travels through a medium, the medium opposes its motion. The resistsnce to the motion of the wave is reffered to as wave <input type="text"/>	impedance	impedance					eExam
<input type="checkbox"/>	FBQ	The energy carried by a wave in a unit time across a unit area normal to the direction of motion is called the <input type="text"/> of the wave	intensity	intensity					eExam
<input type="checkbox"/>	FBQ	For a harmonic progressive wave, the wave velocity is referred to as the <input type="text"/> velocity	phase	phase					eExam

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<input type="checkbox"/>	FBQ	NOUN radio is transmitted on the frequency of 105.9 MHz in the frequency modulated band. Taking the velocity of electromagnetic radiations in free space as $3.0 \times 10^8 \text{ m/s}$ , the wavelength of the radio wave generated by NOUN radio in space is <input type="text"/> m to the nearest whole number.	3	three				eExam
<input type="checkbox"/>	FBQ	The ratio of the wavelength to the period is the <input type="text"/> of a wave.	velocity	velocity				eExam
<input type="checkbox"/>	FBQ	The distance between two successive particles vibrating in phase is known as the <input type="text"/> .	wavelength	wavelength				eExam
<input type="checkbox"/>	FBQ	The reciprocal of the period of vibration of a particle in the medium through which a wave propagates is the <input type="text"/> of the vibration	frequency	frequency				eExam
<input type="checkbox"/>	FBQ	Longitudinal waves are composed of alternate compression and <input type="text"/> .	rarefaction	rarefaction				eExam
<input type="checkbox"/>	FBQ	A section through an advancing wave in which all points are in the same phase of vibration is called a <input type="text"/> .	wavefront	wavefront				eExam
<input type="checkbox"/>	FBQ	The wave in which the motion of the particles of the medium is perpendicular to the direction of propagation of the wave is called a <input type="text"/> wave.	transverse	transverse				eExam
<input type="checkbox"/>	FBQ	A single, isolated disturbance that propagates through space with time, carrying with it energy and momentum is called a <input type="text"/> .	pulse	pulse				eExam
<input type="checkbox"/>	FBQ	Water and sound waves are example of <input type="text"/> waves	mechanical	elastic				eExam
<input type="checkbox"/>	FBQ	<input type="text"/> wave are waves that require material media for their propagation	mechanical	elastic				eExam
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<input type="checkbox"/>	FBQ	The oscillation of longitudinally coupled masses is not simple harmonic but the motion can be analysed in terms of <input type="text"/> , each of which has a definite frequency and represents simple harmonic motion	normal modes	normal modes					eExam
<input type="checkbox"/>	FBQ	Atoms in solids are held together by interatomic forces and perform what could best be described as <input type="text"/> oscillation	coupled	coupled					eExam
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<input type="checkbox"/>	FBQ	The number of radians through which the a weakly damped system oscillates as its average energy decays to $E_0 e^{-1}$ is a measure of the <input type="text"/>	quality factor	quality factor					eExam
<input type="checkbox"/>	FBQ	The time taken for the amplitude of a damped oscillation to decay to $e^{-1} = 0.368$ of its original value is called the <input type="text"/> time.	relaxation	relaxation					eExam
<input type="checkbox"/>	FBQ	A heavily damped, non-oscillatory behaviour of a simple harmonic oscillator is known as the <input type="text"/>	dead - beat	dead-beat					eExam
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<input type="checkbox"/>	FBQ	The algebraic sum of two orthogonal (mutually perpendicular) vibrations having different amplitudes and slightly different frequencies gives a resultant oscillation which traces curves whose shapes undergo a slow change with time. The resulting patterns which are traced out are called <input type="text"/> figures	Lissajous	Lissajous					eExam
<input type="checkbox"/>	FBQ	The sum of two collinear harmonic oscillations of the same frequency is also a harmonic oscillation of the same frequency and along the same line, but it has a new <input type="text"/> and a new <input type="text"/> .	amplitude, phase constant	phase constant, amplitude					eExam
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<input type="checkbox"/>	FBQ	Given that $x(t) = a \cos(\omega_0 t + \phi)$ is the displacement of a simple harmonic oscillator, the quantity $\omega_0 a \sin(\omega_0 t + \phi) = \omega_0 (a^2 - x^2)^{1/2}$ is the instantaneous <input type="text"/> of the motion of the system.	velocity	velocity				eExam
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<input type="checkbox"/>	FBQ	For a simple harmonic oscillator, the number of vibrations executed per second is called <input type="text"/>	frequency	frequency				
<input type="checkbox"/>	FBQ	The solution of the differential equation of a simple harmonic oscillator gives the displacement of the system as a function of time in the form $x(t) = A \cos(\omega_0 t + \phi)$ . The quantity $(\omega_0 t + \phi)$ is called the <input type="text"/> of the vibration of the system at time t.	phase	phase angle				
<input type="checkbox"/>	FBQ	The equation of a simple harmonic oscillator is given as $\frac{d^2x}{dt^2} + \omega_0^2 x = 0$ . The $\omega_0$ is the <input type="text"/> of the system	angular frequency	angular velocity				
<input type="checkbox"/>	FBQ	For a simple harmonic motion to persist, a force given $F = -kx$ , where the symbols have their usual meaning, must act on it. The quantity k is referred to as the <input type="text"/> constant	force	force				
<input type="checkbox"/>	FBQ	For a simple harmonic oscillator, the direction of the <input type="text"/> force is always opposite to the displacement of the system from its equilibrium position	restoring	restoring				

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