ECAT Pre General Science Online Test

Sr	Questions	Answers Choice
1	When the object lies between F and 2F, the image formed by is formed at:	A. Virtual B. Diminished C. Erect D. Real
2	When the object lies between F and 2F, the image formed by is formed at:	A. Real B. Virtual C. Diminished D. Erect
3	A convex lens acts as diverging lens when the object is placed:	A. Beyond 2F B. At 2F C. With focal length D. Between F and 2F
4	A convex lens acts as diverging lens when the object is placed:	A. Between F and 2F B. At 2F C. With focal length D. Beyond 2F
5	The distance from eye to near point is taken as:	A. 10 cm B. 15 cm C. 20 cm D. 25 cm
6	With age, least distance of distinct vision:	A. Increases B. Decreases C. Is not affected D. None is correct
7	The least distance of distinct vision is:	A. 10 cm B. 25 cm C. 50 cm D. 100 cm
8	In YDS experiment, fringe spacing means the distance between two consecutive ____fringes.	A. Bright B. Dark C. Any of A and B D. None of these
9	In an interference pattern of Young's double slit(YDS) experiment:	A. Bright fringesare wider than dark fringes B. Dark fringes are wider than bright fringes C. Both dark and bright fringes are of equal width D. Central fringes are wider than the outer fringes
10	In case of constructive interference of two waves, the amplitude of the resultant wave is _____ either of the waves:	A. Greater than B. Equal to C. Smaller than D. None of these
11	The terms phase difference and path difference are:	A. Same B. Different C. Equal D. None of these
12	In case of destructive interference of two waves, the amplitude of the resultant wave will be ____ either of the waves:	A. Greater than B. Smaller than C. Equal to D. None of these
13	To observe interference of light, the condition, which must be met with is that the sources must be:	A. Monochromatic B. Phase coherent C. Both of above D. None of above
14	To sources are said to be coherent if they have:	A. Same amplitude B. Same wavelength C. Definite phase relation with each other

		D. None of them
15	The appearance of the colour in the soap (oil) film results from:	A. Dispersion B. Interference C. Reflection D. Refraction
16	The property of light which does not change with the nature of the medium is:	A. Frequency B. Amplitude C. Wavelength D. None of these
17	A line which represents the direction of travel of a wave is known as:	A. Spherical Wavefront B. Locus C. Ray D. Either B or C
18	Huygen's principles states that:	A. Light has dual nature B. Either of these C. None of these D. Light travels in straigth line
19	The wave nature of light was proposed by:	A. Newton B. Thomas Young C. Huygen D. None of these
20	Laws of reflection and refraction can also be explained by:	A. Particle nature of light B. Quantum nature of light C. Wave nature of light D. Complex nature of light
21	The speed of the secondary wavelets as mentioned in Huygen's principle is _____ the speed of propagation of the wave itself.	A. Equal to B. Greater than C. Smaller than D. None of these
22	When a source of light isat very large distance,the shape of wavefront is:	A. Spherical B. Cylindrical C. Plane D. None of these
23	Speed of light in vacuum depends upon:	A. Frequency B. Wavelength C. Amplitude D. None of these
24	In case of point, source of light shape of wavefront is:	A. Spherical B. Cylindrical C. Plane D. None of these
25	Huygen principle is used to determine:	A. Speed of light B. Location of wavefront C. About polarized or unpolarized light D. None of them
26	Angle between the ray of light and the corresponding wavefront is:	A. 0<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 60<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background- attachment: initial; background-origin: initial; background-clip: initial;">° C. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. 120<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-

		repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°
27	The locus of all the points in the same phase of vibration is called:	A. Wave packet B. Wave front C. Wave number D. None of them
28	Monochromatic light means waves of:	A. Same frequency B. Same colour C. Same wavelength D. All of them
29	Frequency of red color as compared to that of violet color is:	A. Equal B. Smaller C. Greater D. None of these
30	Wave length of that color as compared to that of violet color is:	A. Smaller B. Longer C. Equal D. None of these
31	Which one of the following can act approximately as a source of monochromatic light;	A. Neon lamp B. Fluorescent tube C. Sodium lamp D. None of these
32	Electromagnetic waves transport:	A. Energy only B. Momentum only C. Both A and B are correct D. None of is correct
33	Wave length of light, on the average, is given by:	A. 10⁻¹⁴_m B. 10⁻¹⁰_m C. 10⁻⁶_m D. 10⁻⁴_m
34	Light waves are:	A. Transverse wave B. Longitudinal wave C. Compressional wave D. None of them
35	Light has:	A. Wave nature B. Particle nature C. Dual nature D. None of these
36	For transmission of both transverse and longitudinal waves, we can use:	A. Solid B. Gas C. Plasma D. None of these
37	transverse wave motion is possible in:	A. Air B. A mixture of NH₃and O₂ C. Strings D. All of these
38	The wave motion set up in any medium depends upon:	A. Elasticity B. Inertia C. Density D. All of these
39	If one end of a rubber cord is fixed with a support and the other end is wiggled by hand, the waves generated on the card are:	A. Stationary waves B. Transverse waves C. Both of these D. None of these
40	Which one of the following wave motions is transverse:	A. Wave motion produced in water when a piece of stone is thrown into it B. Pulling of weight hanging vertically with a spiral spring C. Both of these D. None of these
41	Of the following, the option _____ reminds of longitudinal waves.	A. Sound waves B. Heat waves C. Electromagnetic waves D. Light waves
42	Crests and troughs are formed in:	A. Longitudinal waves B. Transverse waves C. Both of these D. None of these
		A. In circles

43	In transverse waves, the individual particles of the medium move:	B. Perpendicular to the direction of level C. Parallel to the direction of level D. None of these
44	The portion of the water above its mean level forms a:	A. Crest B. Trough C. Both A and B D. None of these
45	SI unit of wave length is:	A. Kilometer B. Metre C. Centimetre D. Hertz
46	When the particles of the medium vibrate about their mean position, along the direction of the motion of waves, then the waves are called:	A. Longitudinal waves B. Transverse waves C. Water waves D. Complex waves
47	In the formula for finding the speed of waves in the spring, unit of m in Sln units is:	A. kg B. kg-meter C. kg/meter D. Meter/kg
48	Which one of the following elasticizes is possessed by fluids:	A. Young's elastic modulus (length) B. Bulk elastic modulus (volume) C. Modulus of rigidity (shape) D. None of these
49	Which of the following medium/media can transmit both transverse and longitudinal waves:	A. Solids B. Liquids C. Gases D. All of them
50	In solids, only following type/s of wave can travel:	A. Transverse B. Longitudinal C. Both A and B D. None of them
51	Fluids can transmit:	A. Transverse wave B. Compressional wave C. Both of them D. None of them
52	Transverse waves can be set up:	A. Solids B. Liquids C. Gases D. All of them
53	In compressional wave,the layer of medium having reduced pressure is called:	A. Compression B. Elasticity C. Node D. Rarefaction
54	A string is stretched between two points and is plucked at right angles to its length, the vibration produced is:	A. Longitudinal wave B. Transverse wave C. No vibration at all D. None of them
55	The square of 0.4 is:	A. Greater than 0.4 B. Smaller than 0.4 C. Equal to 0.4 D. None of them
56	In the same medium, velocity of the wave:	A. Goes on increasing B. Remains constant C. Goes on decreasing D. None of these
57	A traveling wave has a shape of:	A. Square wave B. Sine wave C. Parabola D. hyperbola
58	The distance covered by the wave in one second is:	A. Wave number B. Wave length C. Frequency D. Wave speed
59	The distance covered by the wave during one period is called its:	A. Wave number B. Frequency C. Wavelength D. Time period
60	Longitudinal waves are also called:	A. Congressional waves B. Transverse waves C. Radio waves

		D. None of them
61	Which of the following is not mechanical wave?	A. Sound wave B. Light wave C. wave produced in spring D. None of them
62	When a wave is travels from one place to another, it transfers:	A. Matter B. Energy C. Momentum D. Both B and C
63	Which of the following is/are example/s if mechanical waves i.e. waves generated in _____:	A. Rope B. Coil of spring C. Water D. All of them
64	The waves which propagate out in the space due to oscillations of electric and magnetic fields are called:	A. Mechanical waves B. Electromagnetic waves C. Matter waves D. All of them
65	The waves which propagate through the oscillations of material particles are known as:	A. Mechanical waves B. Electromagnetic waves C. Any of them D. None of them
66	The restoring force is always directed towards:	A. Rest position B. Equilibrium position C. Mean position D. All of them
67	Amplitude is the displacement of the vibrating body from:	A. One extreme position to the other extreme position B. Mean position any one extreme position C. Both A and B are correct D. None of these
68	An oscillating body oscillates due to:	A. Applied force B. Restoring force C. Frictional force D. None of these
69	An angle of 180° in circular motion is equivalent to _____ in SHM.	A. Half the vibration B. One vibration C. 3/4th of a vibration D. None of these
70	In SHM, the acceleration is _____ when velocity is _____:	A. Zero, smallest B. Smallest, zero C. Zero, zero D. Zero, greatest
71	An object in SHM will have maximum speed when its displacement from equilibrium position is:	A. Infinity B. Maximum C. Zero D. Minimum
72	If there identical strings each of constant K are hooked together the spring constant of resultant spring will be:	A. 3 K B. 2 K C. K/4 D. K/3
73	Hertz is unit of:	A. Time period B. Displacement C. Amplitude D. Frequency
74	A spring of constant k = 0.4 N m^{-1} is to be extended thorugh 10 cm at a place where g = 10 m sec^{-2}. The mass to be suspended should be:	A. 4 gms B. 0.4 gms C. 40 gms D. None of these
75	A body with frequency of would complete one vibration in:	A. f seconds B. 1/f seconds C. 1 second D. f²second
76	If a given spring of spring constant K is cut into two identical segments, the spring constant of each segment is:	A. K/2 B. 2 K C. 4 K D. None of these
77	The number of vibration in two seconds can be expressed as _____ of frequency of vibration is f:	A. f B. 2 f C. 3 f D. 1/2 f

78	If a force of 0.05 N produces an elongation of 20 mm in a string, then its spring constant will be:	A. 250 N m⁻¹ B. 25 N m⁻¹ C. 2.5 N m⁻¹ D. None of these
79	If mass of 10 gm is suspended from a spring of K=0.8 Nm^{-1}then the extension will be:	A. 10 cm B. 1 m C. 10 mn D. None of these
80	A particle is moving along a circular path with uniform speed. Its projection will execute ___along the _____ of the circle:	A. Circular motion, circumference B. Vibratory, chord C. SHM, diameter D. SHM, circumference
81	When quarter of a circle is completed, phase of vibration is:	A. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 180<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 45<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. 360<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°
82	The body oscillates due to _____ accelerates and overshoots the rest position due to_____,:	A. Applied force, inertial B. Restoring force, friction C. Frictional force, inertial D. Restoring force, inertial
83	Amplitude in SHM is equivalent to _____ in circular motion:	A. Diameter B. Radius C. Circumference D. None of these
84	The restoring force is _____ and opposite to the applied force within _____,:	A. Equal, elastic limit B. Different, the walls of the laboratory C. Different, elastic limit D. None of these
85	When a mass attached to a spring begins to move left or right from the equilibrium position, its P.E.:	A. Increases B. Decreases C. Remains constant D. None of these
86	To and from motion of a body about its mean position is known as:	A. Translatory motion B. Vibratory motion C. Rotatory motion D. None of these
87	In a _____ flow, each particle of the fluid is called a streamline and different streamlines _____cross each other.	A. Streamline, cannot B. Turbulent, cannot C. Streamline, can D. None of these
88	The study of fluid in motion basically involves law of conservation of:	A. Mass B. Energy C. Change D. Both A and C E. Both A and B

89	The drag force acting on a spherical droplet of radius 10^{-5}m moving with a velocity of 1 cm/sec in a fluid of velocity 5.31 x 10^{-7}m/sec. The units comes out to be:	A. 10⁻¹⁶N B. 10⁻¹⁴N C. 10⁻¹²N D. 10⁻¹⁰N
90	The dimensions of viscosity are:	A. M²L⁻¹T⁻² B. M⁻¹L¹T⁻¹ C. M⁻¹L⁻¹T D. ML⁻¹T⁻¹
91	The unit of viscosity is SI system is:	A. Kg⁻¹m sec⁻¹ B. Kgm⁻¹ sec⁻¹ C. Kg⁻¹m⁻¹ sec D. None of these
92	When the upward drag force of the fluid becomes equal to downward force of gravity of the droplet, then its velocity:	A. Starts increasing B. Starts decreasing C. Becomes constant D. Is called escape velocity
93	0.10 cm can be written as:	A. 1.0 x 10⁻²m B. 1.0 x 10⁻³cm C. 1.0 x 10⁻⁴cm D. 1. x 10⁻⁴m
94	Stoke;s law is not applicable when the speed of the object moving through a fluid is:	A. Zero B. Small C. Large D. None of these
95	Drag force increases if speed of the object moving through the fluid:	A. Increases B. Decreases C. Remains constant D. None of these
96	Fog droplets are suspended in air when their weight is balanced by:	A. Force of gravity B. Upward trust due to air C. Surface tension D. None of these
97	At high speed, fluid friction _____ and fuel consumption ___,:	A. Increases, decreases B. Increases, increases C. Decreases, increases D. None of these
98	Two copper balls of 1 cm and 2 cm in diameter are simultaneously dropped in the same viscous medium. The terminal velocity of bigger ball is:	A. Not affected due to its size B. Twice that of small size ball C. Four times that of small size ball D. 1/4th of that of small size ball
99	When the droplet moves with terminal velocity in a fluid, the net force acting on the droplet is:	A. F_D-mg B. Zero C. mg-F_D D. None of these
100	The _____ viscous the medium is _____, is the value of terminal velocity of the droplet:	A. More, lesser B. Lesser, more C. Both A and B D. Lesser, lesser