Physics General Science Test Hard Mode

Sr	Questions	Answers Choice
1	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
2	Two forces of 10N and 15N are acting simultaneously on an object in the same direction. Their resultant is	A. Zero B. 5N C. 25N D. 150N
3	Which of the following lists of physical quantities consists only of vectors:	A. Time,temperature,velocity B. Force,volume,momentum C. Velocity,acceleration,mass D. Force,acceleration,velocity
4	A couple produces	A. Purely linear motion B. Purely rotational motion C. Linear and rotational motion D. No motion
5	A charge Q is divided into two parts q and Q - q and separated by a distance R. the force of repulsion between them will be maximum when:	A. q = Q/4 B. q = Q/2 C. q = Q D. None of these
6	A sun rise or sun set, the sun looks reddish because.	A. The sun is coldest at these times B. Of the effects of reflection and refraction C. The sun is hottest at these times D. Of the scattering of light
7	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
8	The essential distinction between X-rays and y-rays is that	A. y-rays have smaller wavelength than X-rays B. y-rays emanate from nucleus while X-rays emanate from outer part of the atom C. y-rays have greater ionizing power than X-rays D. y-rays are more penetrating than X-rays
9	If the dot product of two non-zero vectors vanishes the vectors will be	A. In the same direction B. Opposite to each other C. Perpendicular to each other D. Zero
10	Who explained the origin of the Fraunhofer lines?	A. Fraunhoffer B. Kirchhoff C. Fresnel D. Snell
11	The acceleration 'a' in m/s^2 of a particle is given by $a = 3 t^2 + 2 t + 2$,where 't' is the time if the particle starts out with a velocity v = 2 m/s at t = 0, then the velocity at the end of 2 second is	A. 12 m/s B. 24 m/s C. 18 m/s D. 36 m/s
12	In a simple harmonic motion (SHM) which of the following does not hold?	A. The force on the particle is maximum at the ends B. The acceleration is 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.
	The sum of the magnitude of two forces acting at a point is 18 and the magnitude of their	A. 3, 15

13	resultant is 12. If the resultant is at 90° with the force of the smaller magnitude then their magnitude are:	B. 4, 14 C. 5, 13 D. 6, 12
14	When a hydrogen atom is bombarded the atom is excited to the n = 4 state of hydrogen atom.The energy released when the atom falls from n = 4 state to the ground state is	A. 1.275 eV B. 12.75 eV C. 5 eV D. 8 eV
15	How does the Young's modulus vary with the increase of temperature?	A. Decrease B. Increase C. Remains constant D. First increases and then decreases
16	A body is dropped from a tower with zero velocity reaches ground in 4s. The height of the tower is about	A. 80 m B. 20 m C. 160 m D. 40 m
17	The velocity of a particle at an instant is 10 m/s and after 5 s the velocity of the particle is 20 m/s.The velocity 3s before in m/s is:	A. 8 B. 4 C. 6 D. 7
18	Light appears to travel in straight lines since	A. It is not absorbed by the atmosphere B. It is reflected by the atmosphere C. Its wavelength is very small D. Its velocity is very large
19	The part of a transistor which is heavily doped to produce large number of majority carriers is	A. Emitter B. Base C. Collector D. Any of the above depending on nature of transistor.
20	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