MDCAT Physics Chapter 6 Waves Online Test

Sr	Questions	Answers Choice
1	With the propagation of longitudinal waves through a material medium, the quantitiestransferred in the direction of propagation are:	A. Energy, momentum and mass B. Energy and momentum C. Energy and mass D. Energy
2	When temperature increases, frequency of organ pipe:	A. Decreases B. Remains the same C. Increases D. Becomes zero
3	A progressive sound wave is a means of transferring energy. A progressive sound waveof constant frequency is generated in air. The intensity of energy transfer is directlyproportional to another of the wave parameters. Which of the following is correct?	A. Intensity □ (□□□□□□□□□□)² B. Intensity □ (□□□□□□□□ □□□□)² C. Intensity □ (□□□□□) ² D. Intensity □ (□□□□□□□□□□*h*)²
4	A wave which consists of a single, non-repetitive disturbance is called a	A. Continuous wave B. Longitudinal wave C. Pulse D. Transverse wave
5	If source and observer are moving towards each other with same speed and aftercrossing they are receding each other then frequency observed by observer:	A. Decreases B. Remains constant C. Increases D. First Increases then decreases
6	The fundamental frequency in a stretched string is 10 Hz. To double the frequency, the tension in it must be changed to:	A. T₂ = 2T₁ B. T₂ = 4T₁ C. T₂ = T₁ D. none of these
7	Which one is the case when the wavelength is actually changed?	A. When source move relative to observer B. When observer move relative to source C. When observer moves around a stationary source at the center of circle D. When the relative displacement between source and observer is zero
8	A longitudinal sinusoidal wave has wavelength of 1cm and a period of 2sec. Its wavevelocity is:	A. 50 cm/ sec B. 0.5 cm/ sec C. 5 m/ s D. 0.005 m/ sec
9	A closed organ pipe and an open organ pipe have their first overtones of identicalfrequency. Their respective lengths are in the ratio:	A. 1 : 2 B. 4 : 3 C. 2 : 3 D. 3 : 5
10	A sonar depth finder in a boat uses sound signals to determine the depth of water. Fourseconds after the sound leaves the boat it returns to the boat because of reflection fromthe bottom. Assume the speed of sound in water is 1,460 meters per second. The depth of the water is, in meters, :	A. 2,200 B. 4,800 C. 4,400 D. 2,920
11	The spectrum of a star's light is measured and the wavelength of one of the lines as thesodium's line is found to be 589 nm. The same line has the wavelength of 497 nm whenobserved in the laboratory. This means the star is	A. Moving away from the earth B. Moving towards the earth C. Stationary D. Revolving around the planet
12	A stationary wave is established in a string which vibrates in four segments at afrequency of 120 Hz. Its fundamental frequency is:	A. 15Hz B. 60Hz C. 30Hz D. 430Hz
13	An organ pipe open at both ends and another organ pipe, closed at one end willresonate with each other, if their lengths are in ration of	A. 1:1 B. 1:4 C. 2:1

		D. 1:2
14	In a closed organ pipe, the fundamental frequency is f. What will be the ratio of thefrequencies of the next three overtones?	A. 2 : 3 : 4 B. 3 : 7 : 11 C. 3 : 4 : 5 D. 3 : 5 : 7
15	A whistle is revolved with high speed in a horizontal circle of radius R. to an observer at the centre of the circle the frequency of the whistle will appear to be:	A. Decreasing B. Increasing C. Both D. Constant
16	The fundamental frequency of a closed organ pope is 50 Hz. The frequency ofsecond over tone is	A. 100hz B. 150hz C. 60hz D. 250hz
17	In which of the following, Doppler's effect is not applicable?	A. To find speed of satellite B. To find objects under water C. To find speed of star D. To tune a musical instrument
18	If a transverse wave has a speed of 10 m/ sec and frequency of 10 cycle/ sec itswavelength is:	A. 1 m B. 10⁻² cm C. 10 m D. 10 cm
19	Bats navigate and find food by:	A. Ultrasonic B. Echolocation C. Refraction
20	A closed organ pipe and an open organ pipe have their first overtone identical infrequency. Their lengths are in ratio	A. 3:4 B. 1:2 C. 2:3 D. 3:5