MDCAT Physics Chapter 6 Waves Online Test

Sr	Questions	Answers Choice
1	A church organ consist of open ended pipes ranging from 4m to 4 mm, if the speed ofsound is considered as 400 m/s then the min and max frequency is:	A. 400 Hz and 4 kHz B. 100 Hz and 100 kHz C. 50 Hz and 50kHz D. 400 Hz and 400 kHz
2	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
3	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
4	When an observer moves towards a stationary source with a speed equal to 1/5 timesof speed of sound, the percentage increase in the frequency of sound is:	A. 20% B. 40% C. 5% D. 10%
5	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
6	A sonometer wire 100 cm in length has a fundamental frequency of 330 Hz. Thevelocity of propagation of waves along the wire is	A. 115m/sec B. 115m/sec C. 660m/sec D. 990m/sec
7	The frequency of the fundamental mode of open at one organ pipe is 400 Hz. Ifone end of pipe is closed the fundamental frequency will be	A. 800 Hz B. 600 Hz C. 400 Hz D. 200 Hz
8	A wave which consists of a single, non-repetitive disturbance is called a	A. Continuous wave B. Longitudinal wave C. Pulse D. Transverse wave
9	When passes from medium to another, deviate from its path is called	A. reflection B. refraction C. diffraction D. transmission
10	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
11	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
12	A listener observes the frequency “f” of stationary source. If it move toward with 3 times of velocity of sound. Then the apparent frequency of the sound will be	A. f B. 3f C. f/2 D. 4f
13	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
14	Where in standing wave, do the vibrations of the medium occur?	A. Only at the nodes B. Only at the antinodes C. At all points between the nodes D. At all points between the

		antinodes
15	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 □ (□□□□□□□□□I)²
16	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
17	When temperature increases, frequency of organ pipe:	A. Decreases B. Remains the same C. Increases D. Becomes zero
18	If the tension in a string stretched between two fixed points is made four times, the frequency of the fundamental harmonic will become:	A. Two times B. Three times C. Four times D. Six times
19	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
20	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