BAHRIA COLLEGE ZAFAR CAMPUS ISLAMABAD, DEPARTMENT OF PHYSICS
CLASS X, HOME WORK-1
LAST DATE OF SUBMISSION: 03.DECEMBER.2020 TIME 1200 Hrs.

NOTE: SOLVING AND SUBMISSION OF THESE ASSIGNMENTS ARE COMPULSORY THESE CAN BE SUBMITTED BY ANY MEDIUM TO THE CONCERENED TEACHER BEFORE THE DEADLINE, ATTEMPT ALL QUESTIONS:-

CHAPTER 10, SIMPLE HARMONIC MOTION AND WAVES

REVIEW QUESTIONS

1. What is simple harmonic motion? What are the necessary conditions for a body to execute simple harmonic motion?
2. Think of several examples of motion in everyday life that are simple harmonic.
3. How can you define term wave? Elaborate the difference between mechanical and electromagnetic waves. Give examples of each.
4. Distinguish between longitudinal and transverse waves with suitable examples.
5. Draw a transverse wave with an amplitude of 2cm and a wavelength of 4cm. label a crest and trough on the wave.
6. Derive a relationship between velocity, frequency and wavelength of wave. Write a formula relating velocity of a wave to its time period and wavelength.
7. Waves are the means of energy transfer without transfer of matter. Justify this statement with the help of a simple experiment.
8. Does increasing the frequency of a wave also increase its wavelength? If not, how are these quantities related.

CONCEPTUAL QUESTIONS

1. If the length of simple pendulum is doubled, what will be the change in its time period?
2. A ball is dropped from a certain height onto the floor and keeps bouncing. Is the motion of ball simple harmonic? Explain
3. A student performed two experiments with simple pendulum. He/she used two bobs of different masses by keeping other parameters constant. To his/her astonishment the time period of the pendulum did not change. Why?
4. What types of do not require any material medium for their propagation?

NUMERICAL PROBLEMS

Solve numerical problem
10.1, 10.2, 10.3, 10.4, 10.5, 10.6, 10.7, 10.8, 10.9, 10.10