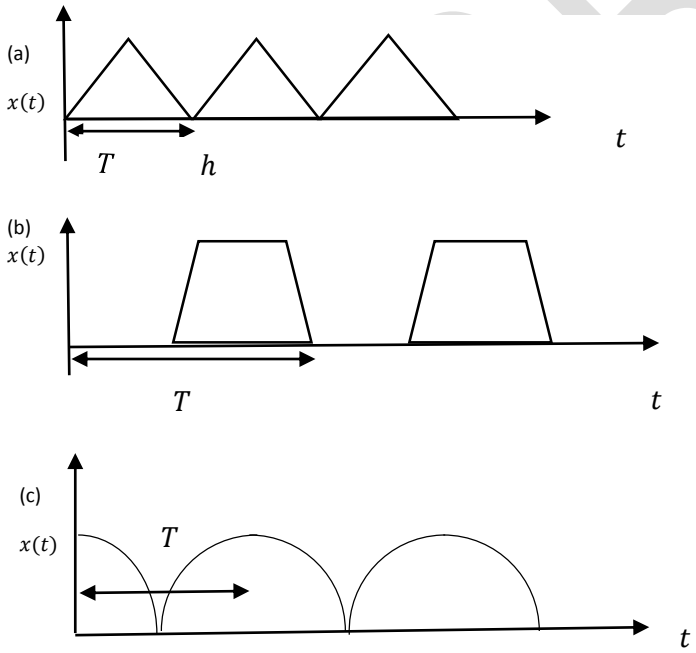
OSCILLATIONS

General Instructions: Answer all the questions. If you are unable to answer any question, go through the page number that is given against that particular question in the text book. You can find the answer.

Test Paper-I

MAX MARKS: 30 **TIME: 90Mts**

1	What is an oscillatory motion? Give examples	P336	1
2	Give any four applications of oscillatory motion.	P336	2
3	State whether the following motions are periodic or not. Give examples for each	P337	3



4	What is the importance of equilibrium position in the path of motion of a body undergoing periodic motion?	P337	2
5	Can you say that every oscillatory motion is periodic and vice versa. Give your answer with examples.	P337	2
6	What is the difference between oscillation and vibration?	P337	2
7	What is Simple Harmonic Motion? What are the characteristics of such motion?	P337	2
8	What are damped oscillations? What is the cause of damping?	P337	2
9	Define time period of oscillation. What is the SI unit of measurement of it? What is the relation between frequency and time period On an average a human heart is found to beat 75 times in a minute. Calculate its frequency and period.	P337	3
10	How will you define displacement in the case of oscillating simple pendulum? Does the term always referred in the context of position only. Give your answer with examples. Also give the equation representing the displacement.	P338	3
11	Show that $f(t) = A\ \cos \omega t$ represents a periodic function. Also find the period of the function	P339	3
12	Which of the following functions represent (a) Periodic and (b) non-periodic motion? Give the period for each case of periodic motion [ω is any positive constant]. a. $\sin \omega t + \cos \omega t$ b. $e^{-\omega t}$ c. $\log \omega t$	P339	3
13	Define the following terms in the case of SHM a. Amplitude b. Angular frequency c. Phase d. Phase constant	P340	2