

QUES 03:-

A tuning fork A, marked 512 Hz, produces 5 beats per second, when sounded with another unmarked tuning fork B. If B is loaded with wax the number of beats is again 5 per second. What is the frequency of the tuning fork B when not loaded?

Sol. When the prong of B is loaded with wax, its frequency becomes less than the original frequency.

If we assume that the original frequency of B is 507, then on loading its frequency will be less than 507. The beats between A and B will be more than 5.

If we assume that the original frequency of B is 517, then on loading its frequency will be less than 517. The beats between A and B may be equal to 5. Hence the frequency of the tuning fork B when not loaded should be 517.