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1.) What is the laser? Explain the following;

(a.) Stimulated Emission

(b.) Population inversion

(c.) Pumping

Ans:- Laser, a device that stimulates atoms or molecules to emit light at particular wavelength and amplifies that light, typically producing a very narrow beam of radiation.

(a.) Stimulated Emission:- It is the process in which an incident photon can interact with an excited atomic electron, causing it to drop to a lower energy level.

(b.) Population Inversion:- It is a process of achieving more electrons in the higher energy state than the lower energy state.

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(C) Pumping :- It is a process in which light is used to raise electrons from a lower energy level in an atom or molecule to a higher one.