

- (a) Define (a) Is each an inertial or non inertial frame of reference. Justify your answer
- (b) What's Wein's displacement law.
- (c) Newton's ring and its application.

(a) Inertial and Non inertial:-

Inertial frame of reference is defined as the frame in which a body is the rest or moving with uniform velocity and is not under any force.

The frames of reference with respect to which an unaccelerated body appears accelerated are called Non-inertial frame.

(b) Wein's law - Wien showed that the maximum energy, E_m of the emitted radiation from black body is proportional to fifth power of absolute temperature (T)

$$E_m \propto T^5$$

$$\text{or } E_m = \text{constant} \times T^5$$

(c) Newton rings - When a monochromatic light falls on the film, we get dark and bright concentric fringes having uniform thickness, these rings are called Newton rings.