**Second exam**

**Q1)** Put (**T**) or (**F**) and correct the following sentences:

1. The reason for expressing fluxes in kinematic form is that the result is given in terms of total amount.
2. The Boltzmann function relates the emitted monochromatic intensity to the frequency and the temperature of the emitting substance.
3. The term blackbody is used for a configuration of material where absorption is complete. Emission by a blackbody is the converse of absorption.
4. When the flux density or the irradiance is from an emitting surface, the quantity is called the monochromatic intensity.
5. Radiowaves have the lowest frequencies in the spectrum, extending downward from about 3 × 105 cps.
6. The vernal equinox (or spring equinox, near 16 to 17 March) and autumnal equinox (or winter equinox, near 22 to 23 September) are the dates when daylight hours equal nighttime hours and the solar declination angle is zero.
7. The solar declination angle δs is defined as the angle between the ecliptic and the plane of the Earth’s equator.
8. Because the Earth is rotating around the Earth moon barycenter, this barycenter is revolving around the earth, the location of the center of the Earth traces a slightly wiggly path as it orbits the earth.
9. The closest distance (perihelion) along the major axis between the Earth and sun is a – c = 146.96 Gm, and occurs at about dp ≈ 4 January

1. The Earth and the moon rotate with a sidereal (relative to the stars) period of 27.32 days around their common center of gravity, called the Earth moon barycenter.

**Q2)** Object at temperature 2680k, have characteristic of blackbody radiant, find its energy emitted at wavelength 0.45um, how it's the wavelength of the peak emission. Used constants if used c1 = 3.74 x 108 W·m–2 · µm4, and

c2 = 1.44 x 104 µm·K , a= 2800 um.k