**NAME:Shailja Kant Tiwari**

**ROLL NO.-081**

AIM:-TO PLOT RAYLEIGH JEANS’ LAW,PLANCK’S LAW,WEIN’S DISPLACEMENT LAW

SOURCE CODE:-

**clear;**

**clf;**

**T=1000**

**c=3e8**

**k=1.3e-23**

**h=6.626e-34**

**np=linspace(1,2e14,500)**

**nr=linspace(5e10,3e13,500)**

**nw=linspace(1,2e14,500)**

**ap=8\*3.14\*h.\*(np.^3)**

**bp=c^3**

**dp=exp(((h.\*np)/(k\*T)))-1**

**up=(ap./(bp.\*dp))**

**ur=((8\*3.14\*k\*T.\*(nr.^2))/(c.^3))**

**aw=8\*3.14\*h.\*(nw.^3)**

**bw=c^3**

**dw=exp((h.\*nw)/(k\*T))**

**uw=(aw./(bw.\*dw))**

**plot(np,up,"r","linewidth",3)**

**plot(nr,ur,"b","linewidth",3)**

**plot(nw,uw,"g","linewidth",3)**

**legend("Planck","Rayleigh-Jeans","Wein")**

OUTPUT:

