Q5. A glass clad fiber is made with core glass of refractive index 1.5 and the cladding is doped to get a frictional index difference of 0.0005. Find [a] the refractive index of the cladding. [b] the critical internal reflection angle [c] Acceptance angle.

**Given :-** µ1=1.5;

**Formula:-**= 1- ; N.A.=

**Solution:-** µ2= µ1(1-)=1.5(1-0.0005) =1.49925

=sin-1= sin-1=88.18˚

=

=sin-1 = 2.718˚

**Ans:- The R.I of cladding is 1.49925 and the critical angle is 88.18 and the acceptance angle is 2.718˚.**