Q1. Calculate the numerical aperture and hence the acceptance angle for an optical fiber. Given that the refractive indices of the core and the cladding are 1.45 and 1.40 respectively.

**Given:**- µ1 =1.45; µ2=1.40

**Formula** :-

**Solution**:- N.A.=

= 0.3775

= sin-1(N.A.) = sin-1(0.1425)

= 8.192o

**Ans:- N.A. of fiber is 0.3775 and its acceptance angle is 8.192**