Step-1

Given that A.B = I = B.A â€¦â€¦â€¦ (i)

BC = I = CB â€¦â€¦â€¦.. (ii)

Let (AB) C = A (BC) [Since by associative law]

= A.I [Since by given BC = I]

= A â€¦â€¦â€¦. (a)

Step-2

Let A (BC) = (AB).C [Since by associative law]

= I.C [Since by given AB = I]

= C

We have (AB) C = A (BC)

$\Rightarrow \boxed{A = C}$

Hence proved.