## Prof. Supriyo Datta

#### L1.2 Quiz

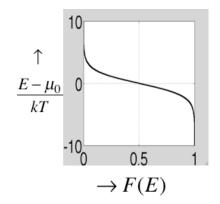
#### **Answers**

# 1.2. Two Key Concepts

#### **1.2a.** The function F(E) shown here is

# (a) the Fermi function, $f_0(E)$

- (b)  $1 f_0(E)$
- (c)  $1 + f_0(E)$
- (d)  $kT \, \P f_0 / \P E$
- (e)  $-kT \P f_0 / \P E$



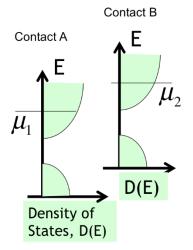
### **1.2b.** The density of states in two contacts are shown:

Contact A is otherwise identical to contact B, but is at a different potential which causes them to be vertically each other:

- (a) A is positive relative to B so that electron energies are higher
- (b) A is positive relative to B

so that electron energies are lower

- (c) B is positive relative to A so that electron energies are lower
- (d) B is positive relative to A so that electron energies are higher
- (e) None of the above



displaced with respect to