6 (a) (i) Define the *capacitance* of a parallel plate capacitor.

....

....

.... [2]

(ii) State **three** functions of capacitors in electrical circuits.

1. ....

2. ....

3. ....
[3]

(b) A student has available **three** capacitors, each of capacitance $12\,\mu\text{F}$.

Draw diagrams, one in each case, to show how the student connects the capacitors to give a combined capacitance between the terminals of:

(i) $18\,\mu\text{F}$

O———   ———O

[1]

(ii) $8\,\mu\text{F}$.

O———   ———O

[1]

[Total: 7]