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 four capacitors, each of capacitance 24 μF.

The capacitors are connected as shown in Fig. 6.1.

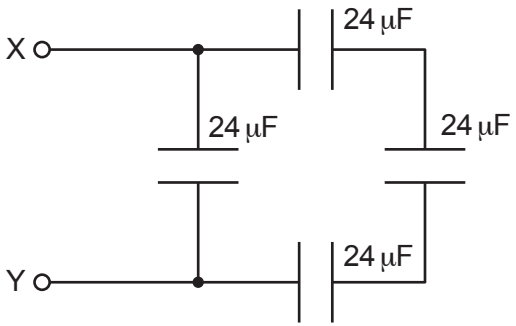

Fig. 6.1

Calculate the combined capacitance between the terminals X and Y.

capacitance = ... μF [2]

[Total: 7]