C1/B
Surds

① Simplify each of the following, expressing your answers in surd form:

(a) $\sqrt{45}+\sqrt{80}-\sqrt{125}$; [3]

(b) $\dfrac{6+\sqrt{2}}{2+\sqrt{2}}$. [4]

② *(a)* Simplify the following.

$$\sqrt{48}+\sqrt{27}-\frac{6}{\sqrt{3}}$$ [4]

(b) Simplify $\dfrac{2+\sqrt{7}}{3+\sqrt{7}}$, expressing your answer in surd form. [4]

③ Simplify $\dfrac{2+\sqrt{2}}{2-\sqrt{2}}$ expressing your answer in surd form. [4]

④ Simplify $\dfrac{\sqrt{5}+3}{\sqrt{5}-1}$,

expressing your answer in surd form. [4]

⑤ Simplify $\dfrac{2-\sqrt{5}}{\sqrt{5}+1}$,

expressing your answer in surd form. [4]

⑥ Simplify

$$\frac{6+\sqrt{7}}{\sqrt{7}-2},$$

expressing your answer in surd form. [4]

⑦ Simplify $\dfrac{5-\sqrt{7}}{\sqrt{7}+1}$,

expressing your answer in surd form. [4]

(8) Simplify $\frac{11-2\sqrt{10}}{\sqrt{10}-2}$,

expressing your answer in surd form. [4]

(9) Simplify $\frac{3+2\sqrt{3}}{5-\sqrt{3}}$,

writing your answer in surd form. [4]

(10) Simplify $\frac{2\sqrt{3}-\sqrt{2}}{\sqrt{3}+\sqrt{2}}$, expressing your answer in surd form. [4]

(11) Simplify $\frac{4\sqrt{5}-\sqrt{3}}{\sqrt{5}+\sqrt{3}}$,

expressing your answer in surd form. [4]

(12) Simplify $\frac{2\sqrt{5}-\sqrt{2}}{\sqrt{5}+\sqrt{2}}$,

expressing your answer in surd form. [4]

(13) Simplify $\frac{2\sqrt{7}+3}{\sqrt{7}+2}$,

expressing your answer in surd form. [4]

(14) Simplify

$$\frac{2\sqrt{5}+\sqrt{2}}{\sqrt{5}-\sqrt{2}}$$

expressing your answer in the form $a+\sqrt{b}$, where a and b are integers. [4]

(15) Simplify

$$\frac{4}{\sqrt{5}+1} + \frac{1}{\sqrt{5}-1},$$

expressing your answer in surd form. [4]