

Numerical answers

Question 1.

- (b) $n = 2$.
- (c) Solutions agree up to approx. $x = 5\text{mm}$.

Question 2

- (a) (ii) $\alpha = 8.9 \times 10^{-6} \text{m}^2/\text{s}$. $T_p = 770 \text{ }^\circ\text{C}$.

Question 4.

- (b) (i) $p = 350 \text{ MPa}$.
- (ii) $p = 277 \text{ MPa}$ Efficiency = 0.79 i.e. 79%.