Engineering Tripos Part IIB: Module 4C2
Designing with Composites

Numerical answers - 2014/15

1. (b) (i) 0, 68, 90°, (ii) ε_{xy}= 0.0046 or ε_{12}= 0.038

(c) $[A] = \begin{bmatrix} 1.37 & 0.97 & 0 \\ 0.97 & 1.37 & 0 \\ 0 & 0 & 1.05 \end{bmatrix} tE_1$, $[B] = 0$

2. (b) (i) 11.0 kN m, (ii) 25.4 kN m

3. (c) (i) 66 MPa, (ii) 94 MPa, (iii) 73 MPa, assuming that $G_C=(G_{IC} + G_{IIC})/2$.