NUMERICAL SOLUTIONS FOR 2012 EXAM

Module 4D7

CONCRETE AND MASONRY STRUCTURES

1 (c)

(i) $S_k = 13.6$ kNm

(ii) $P_f = 6.53 \times 10^{-3}$

2 (b)

(i) WLC_1 = £57.6k assuming i-1; WLC_1 = £57.1k assuming i

(ii) WLC_2 = £60.9k for t = 35 years; WLC_2 = £61.7k for t = 40 years

3

(a) $w_{LL} = 2.4$ kNm^{-1}

(b) $\sigma_c = 15.2$ MPa ; $\varepsilon_s = 0.0012$

(c)

(i) $\delta = 5.7$ mm

(ii) $\delta = 23.7$ mm

(d) $\delta = 14.2$ mm

4 (a)

(i) $q_{lat} = 176.3$ kPa

(b) $P = 0.67W$

(c) $H = L$