

Engineering Tripos Part IIA 2006

Module 3C4

Machine Design – Transmissions

1 (b) (iii) $Q = \frac{85}{7} \omega^2 a^2 m$

2 (c) $Q = T_1 R \left(1 - \exp \left(-\frac{2\sqrt{2}}{3} \mu \pi \right) \right)$

3 (b) (i) 9.2 m/s 92%

(ii) 76%

(iii) 15

4 (b) infinite

(c) (ii) 0.2 mm 3.3 kN