

THE HONG KONG POLYTECHNIC UNIVERSITY
HONG KONG COMMUNITY COLLEGE

Subject Title : Engineering Mechanics II

Subject Code : CCN3126

Session : Semester Two, 2015/16

Numerical Answers

Question A1

- (a) 22.1 kg·m²
- (b) 1.70 s
- (c) 90.3 mm/s

Question A2

- (a) 0.3 kN ↑
- (b) 0.707° ↗
- (c) 7.07 mm ↓

Question A3

- (b) -34.6 MPa; 34.6 MPa; 20 MPa
- (c) -24.6°, 65.4°; 52.9 MPa, -52.9 MPa, 52.9 MPa

Question B1

- (a) 4.24 rad/s (clockwise); 1260 N ←, 56.7 N ↑
- (b) 6 rad/s (clockwise); 3210 N ↑

Question B2

- (a) 6.6 kN ↑, 4.16 kN ←; 10.2 kN ↑
- (c) 94.9 MPa

Question B3

- (a) 30 kN; 6 kN·m; 4.5 kN·m
- (b) 129 MPa; -129 MPa; 129 MPa

Question B4

- (a) 62.5 kN
- (b) 32.9 kN