

THE HONG KONG POLYTECHNIC UNIVERSITY
HONG KONG COMMUNITY COLLEGE

Subject Title : Engineering Mechanics II

Subject Code : CCN3126

Session : Semester Two, 2016/17

Numerical Answers

Question A1

- (a) $4.8 \text{ kg}\cdot\text{m}^2$
- (b) 0.363 s
- (c) 0.866 m/s

Question A2

- (b) -34.6 MPa ; $+34.6 \text{ MPa}$; 20 MPa
- (c) $+32.6 \text{ MPa}$; -52.6 MPa ; 42.6 MPa ; -35° ; $+55^\circ$

Question A3

- (b) 1.125 kN or 1.13 kN
- (c) 0.016 m

Question B1

- (a) 3432 N or 3430 N
- (b) 5047 N or 5050 N
- (c) $800 \text{ kg}\cdot\text{m}^2/\text{s}^2$ (counter-clockwise)

Question B2

- (a) $3.8 \text{ kN}\uparrow$; $7.4 \text{ kN}\uparrow$
- (c) 16.3 MPa

Question B3

- (a) $2 \text{ kN}\uparrow$; $6 \text{ kN}\cdot\text{m}$ (counter-clockwise)
- (b) 0 ; 4.01 MPa ; 65.9 MPa ; 3.46 MPa

Question B4

- (a) 27.5 kN
- (b) 24.5 m
- (c) 14.4 kN