

THE HONG KONG POLYTECHNIC UNIVERSITY  
HONG KONG COMMUNITY COLLEGE

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**Subject Title** : Engineering Design Fundamentals    **Subject Code** : CCN2248

**Session** : Semester Two, 2016/17

**Numerical Answers**

**Question C1**

- (a) 913.7 rev/min; 72960 Pa
- (b) 70; 80930 Pa

**Question C2**

- (a) 303.1 MPa; 0.1769
- (b)(i) 6 mm
- (b)(ii) 0.1719
- (b)(iii) 1.697 m/min

**Question C3**

- (d)(i)  $V_A = 360$  rpm;  $V_B = V_C = 180$  rpm;  $V_D = 45$  rpm
- (d)(ii) 0.16 Nm
- (d)(iii) 8