

THE HONG KONG POLYTECHNIC UNIVERSITY
HONG KONG COMMUNITY COLLEGE

Subject Title : Engineering Thermodynamics **Subject Code** : CCN3135

Session : Semester Two, 2015/16

Numerical Answers

Question 1

- (a) 127.41 °C, 0.34921, 0.25168 m³/kg
- (b) 8.13 m³, 3276.25 kJ/kg
- (d) 1636 kJ
- (e) 12.18 A

Question 2

- (a)(i) 402 m/s
- (a)(ii) 0.1743 kg/s
- (b)(i) 22.4×10^{-3} kg/s
- (b)(ii) 23.7×10^{-3} m³/s, 3.79 cm

Question 3

- (a)(i) 0.711 kW
- (a)(ii) 6.96 kW

Question 4

- (a) -0.641 kJ/K
- (b)(ii) 2126 K, 781 K

Question 6

- (b)(i) 0.698
- (b)(ii) 34.3 kJ/kg_{da}, 10704 L/s, 27.0 °C