THE HONG KONG POLYTECHNIC UNIVERSITY

HONG KONG COMMUNITY COLLEGE

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

Session : Semester Two, 2016/17

Numerical Answers

Question 1

(a) $0.1351, 105.97\ ℃, 0.18667\ m^3/kg$
(b) $0.82952 m^3/kg, 2765.94\ kJ/kg$
(d) $43.4\ kJ$
(e) $749\ kJ$

Question 2

(a)(i) $268\ kW$
(a)(ii) $8.18\ m^3/s$
(b)(i) $0.1233\ kg/s$
(b)(ii) $10.17\ kW$

Question 3

(a)(i) 1.603
(a)(ii) $16.98\ ℃, 14.99\ ℃$
(a)(iii) 13.41

Question 4

(b)(ii) $1201 K, 335\ K$

Question 5

(b)(i) $15.61\ mm$
(b)(ii) $1.734\ ℃$

Question 6

(b)(i) $73.5\ kW$
(b)(ii) $70\%, 15.44 \times 10^3\ L/s$
(b)(iii) $24.5\ ℃, 11.3\ g/kg_{da}$