

THE HONG KONG POLYTECHNIC UNIVERSITY
HONG KONG COMMUNITY COLLEGE

Subject Title : General Chemistry I

Subject Code : CCN1110

Session : Semester Two, 2017/18

Numerical Answers

Question B1

(c)(ii) $\Delta H = -152.6 \text{ kJ/mol}$

Question B2

(c)(i) Boiling point of solution = 101°C

Question B3

(a) $K_{\text{C}[2\text{P}(\text{g}) + 3\text{Cl}_2(\text{g})]} = 15.0$; $K_{\text{C}[2\text{P}(\text{g}) + 5\text{Cl}_2(\text{g}) \rightleftharpoons 2\text{PCl}_5(\text{g})]} = 240$

(b)(ii) $\text{pH} = 1.63$

Question B4

(a) Mass of $\text{CH}_3\text{COONa} = 17 \text{ g}$

(b) $\text{pH} = 4.8$; $\text{pOH} = 9.19$

Question C1

(c) $k = 0.17 \text{ s}^{-1}$