Answers to Problems and Questions

P4.1. 99 units.
P4.2. $pK_a = 8.0$.
P4.3. 10.8 mg.
P4.4. 25 liters/mole.
P4.5. 79.4 mg.

Q6.5. 90.605.

P11.1. $R_{m(obs)} = 38.047$, $R_{m(calc)} = 38.423$.
P11.2. $R_{m(obs)} = 53.621$, $R_{m(calc)} = 54.482$.
P11.3. $\eta = 1.47001$.
P11.4. Mole fraction of *n*-hexane in the mixture = 0.89668; the mole fraction of cyclohexane = 0.10332.
P11.5. Weight per cent pyrrole = 61.1; the weight per cent morpholine = 38.9.

P12.1. 2.46 g/100 ml
P12.2. 6.05 g/100 ml
P12.3. $[\alpha]_D^{25} = 19°$ ($c = 1$, ethanol).
P12.4. 0.69°.
P12.5. 35%, 65%.

Q13.1. (a) −0.544 V.
(b) 0.663 V.
Q13.2. 0.123 V; the right electrode, as written, is the positive electrode.
Q13.3. 0.9199 V.
Q13.4. 1.34 V.
Q13.5. (a) Saturated calomel electrode.
(b) Platinum electrode.
(c) Saturated solution of potassium chloride.

P15.1. (a) 1.50×10^{-3} sec^{-1}.
(b) 7.70 min.
(c) 33.3 min.
(d) 51.2 min.

P15.2. 24.6 mA.
P15.3. 9.65 min.
P15.4. (a) 482 A sec^{-1} cm^3 mole^{-1}.
(b) 6.25 sec.
P15.5. (a) 1.78.
(b) 24.

Author Index

Numbers in parentheses are reference numbers and indicate that an author's work is referred to although his name is not cited in the text. Numbers in italics give the page on which the complete reference is listed.

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