CHEMISTRY 204
Practice Hour Exam III
Spring, 2024
Dr. D. DeCoste

Name _____

Signature _____

T.A. _____

Section _____

This exam contains 23 questions on 14 numbered pages. Check now to make sure you have a complete exam. You have two hours to complete the exam. Determine the **best** answer to the first 20 questions and enter these on the special answer sheet. Also, circle your responses in this exam booklet. **Show all of your work and provide complete answers to questions 21, 22 and 23.**

1-20	(60 pts.)	_____
21	(20 pts.)	_____
22	(20 pts)	_____
23	(20 pts.)	_____
Total	(120 pts)	_____

Useful Information:

- Unless otherwise noted, all solutions referred to on this exam are aqueous solutions at 25°C.
- Unless otherwise noted, assume all solutions act ideally.
- 760 torr = 1.00 atm
- R = 0.08206 Latm/molK = 8.3145 J/Kmol
- K = °C + 273
- $N_A = 6.022 \times 10^{23}$

$P_{soln} = \chi_{solvent} P°_{solvent}$ $P_{total} = P_A + P_B = \chi_A P°_A + \chi_B P°_B$

$\pi = iMRT$

$\Delta T = iK_f m_{solute}$ $\Delta T = iK_b m_{solute}$

K_f = 1.86 K/m for water K_b = 0.51 K/m for water

$\varepsilon = \varepsilon° - \frac{0.0591}{n} \log(Q)$ F = 96,485 coulombs 1 Ampere = 1C/s