2007 ans.

1 B 2 B 3. C 4. B 5. B (because water at 100 degrees is boiling, while this liquid is BELOW its boiling point, and so must have a vapor pressure lower than 101.3 Kpa)

6 C ( choice A, NaCl(aq) is a solution, not a pure substance

7. A 8. A 9. B 10. C (gases are more ideal at LOW pressures, and gases with weak attractions are more ideal)

11. C 12. D 13. D 14. B 15. A 16. A 17. B 18. C

19. C 20. B 21. B 22. A 23. D 24.A 25. D 26. A 27. A

28. D 29. B 30. A 31. D 32. A 33. A 34. B 35. C 36. B 37. D 38. B

39. D 40. C 41. A 42. B 43. B 44. A 45. B 46. D 47. D

48. B 49. C 50. A 51. C 52. C 53. D 54. B 55. D 56. B

57. C 58. C 59. A 60. B

Essay I. A Ca atom should show two dots, a Hydrogen molecule is

H:H . B. Ca + 2 H2O  Ca(OH)2 + H2

This is single replacement. II. The ammonia you should know – carbon disulfide is the same structure as carbon dioxide. Ammonia is pyramidal, and carbon disulfide is linear.

III. V= (1 Atm)( 40 ml)(300K) = 110 mL

 ( 0.400 atm)(273 K)

IV. 55.0 x 0.200 + 56.0 x 0.720 + 57.0 x 0.080 = 55.9