

Multiple Choice Response Sheet

Name: _____

1. B

19. _____

2. D

20. _____

3. C

21. _____

4. E

22. _____

5. C

23. _____

6. D

24. _____

7. B

25. _____

8. A

26. _____

9. C

27. _____

10. A

28. _____

11. C

29. _____

12. D

30. _____

13. _____

31. _____

14. _____

32. _____

15. _____

33. _____

16. _____

34. _____

17. _____

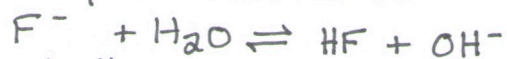
35. _____

18. _____

36. _____

Acid-Base # 2
(Buffers)

1. To prepare this buffer, at least 1.0M of KF should be added to approximately the same amount of the conjugate acid of F^- which would be HF. The equation would be:



The purpose of this buffer would be to keep the pH of the surrounding solution relatively close to 3.45 ($pH = -\log(K_a \text{ of HF})$).

2. Adding HCl to this buffer would cause a sudden drop in the $[OH^-]$ (which is the stress). The equilibrium will shift to the right causing more OH^- to be created. The original amount of OH^- would drop overall causing a slight decrease in pH.

3. * pick a weak acid that will give a pH close to what you need using the formula $pH = -\log K_a$.
- * prepare a solution of that acid's conjugate base which is close to the concentration of the acid (but at least 1.0M).
- * adjust the relative concentrations of acid & base to get the exact pH required.