Answers to sample questions on exam review 2.

1. 

2. a) PCR, c) cDNA library construction

3. Bacterial artificial chromosome (BAC)

4. cDNA, because it can be expressed better in bacterial host cells. Unlike genomic DNA clones, there are no introns that need to be spliced out.

5. meiotic recombination and mating type switching (you really only had meiotic recombination presented in class).

6. (a) and (c)

7. Because deamination of 5-methyl C cannot be recognized by the mismatch repair system (T rather than U is produced) and CG sites are preferentially methylated.

8. Footprinting requires that all of the DNA be bound - any DNA in excess of the amount of protein will not be protected and will not show a footprint. Gel mobility shift involves an excess of DNA.

9. a) paralogs
b) orthologs
c) orthologs
d) paralogs
e) paralogs
f) paralogs