Chapter 11 Concept Review

Directions: Answer the following questions using your notes and textbook

1. Genetic variation in populations lead to differences in _______________________.

2. __________________  _______________________  acts on phenotype

3. Environmental conditions can change and a certain phenotype may become an
   ______________________.

4. Microevolution-observable change in allele frequency of a ____________________ over time

5. Directional Selection- causes _____________ in a populations phenotypic distribution

6. Stabilizing Selection- the intermediate __________________________ is favored and becomes
   more common.

7. Disruptive Selection- occurs when both extremes are favored and ____________________ are selected against

8. Gene flow between populations keeps gene pools __________________.

9. Lack of gene flow increases chance that two populations will evolve into different
   ______________________.

10. Genetic Drift- changes in allele frequencies due to __________________ (Two ways this occurs)

11. Bottleneck Effect- ____________________ drift that occurs after an event (e.g. overhunting)

12. Founder Effect- genetic drift that occurs after a small number of individuals
   ______________________ a new area

13. Mating can have important effect on _____________________ of population
   
   a. Males make many sperm continuously (value of each relatively ________________)
   
   b. Females more limited in number of ______________________ can produce (each
      investment more valuable, and they want a good return)

14. Hardy-Weinberg equilibrium describes populations that are _________ evolving
15. Said genotype frequencies stay the _______________ over time as long as certain conditions are met. (5 conditions)
    a. Very large ______________________ (no genetic drift can occur)
    b. No ______________________ or ______________________ (no gene flow can occur)
    c. No _________________________ (no new alleles can be added to the gene pool)
    d. Random _____________________ (no sexual selection can occur)

16. The Hardy-Weinberg equation is used to ______________ genotype frequencies in a population

17. _____________________ - the rise of two or more species from one existing species

18. Reproductive isolation- when members of different populations can no longer __________ successfully with one another)

19. Behavioral isolation- isolation caused by differences in ______________________ or mating behavior)

20. Geographic isolation- involves physical barriers that __________________ populations

21. Temporal Isolation- __________________ prevents reproduction between populations

22. The response of species to environmental challenges and opportunities is not ______________
    a. Convergent Evolution- evolution towards __________________ characteristics in unrelated species
    b. Divergent Evolution- related species evolve in different directions and become increasingly ______________________

23. _____________________ - two or more species evolve in response to changes in each other

24. Punctuated equilibrium- __________________ of evolutionary activity

25. ________________________ radiation- Diversification of one ancestral species into many descendent species