

Study guide for final examine of Modern Biology (I) Fall 2009

Chapter 10

1. What is genotype? phenotype?
2. Who established the theory of inheritance?
3. Why pea plant was chosen as a model for the study of inheritance?
4. What is allele? Homozygous? Heterozygous?
5. What is the contribution of Walter Sutton? Thomas Hunt Morgan?
6. Co-dominance and related example.
7. Incomplete dominance and related example.
8. Epistasis and related example.
9. Pleiotropy and related example.
10. What is the Theory of independent assortment? Is it correct for all the genes? Why?
11. What can we learn from the backcross of a hybrid and one of its parents?
12. How do environment factors affect the inheritance?
13. What makes eye's color different? Why does it happen?
14. What do "dominance" and "recessive" mean in genetics?

Chapter 11

1. What is karyotyping? What can we learn from karyotyping?
2. How is the gender of embryo determined?
3. What is DNA fingerprinting? What can DNA fingerprinting tell us?
4. Autosomal dominant inheritance and disorders?
5. Autosomal recessive inheritance and disorders?
6. X-linked inheritance and related disorders?
7. How is chromosomal structure changed?
8. Chromosomal number change is often caused by which process?
9. What is polyploidy?
10. What is genetic abnormality? What is genetic disorder?
11. What message can we get from the pedigree?
12. The methods for the prenatal diagnosis?
13. The help you can receive from the genetic counseling?

Chapter 23

1. The characteristics of the animals?
2. What are protostomes and deuterostomes?
3. What is Cambrian explosion?
4. Define the coelom. Acoelomate? Pseudocoelomate? Coelomate?
5. What are Cnidarians? The characteristics of Cnidarians?
6. What are Flatworms? The characteristic of Flatworms?
7. What are Annelids? The characteristic of Annelids?
8. What are Mollusks? The characteristic of Mollusks (Gastropods, Cephalopods and Bivalves)?
9. What are Arthropods? The characteristics of Arthropods?
10. What are Roundworms? The characteristics of Roundworms?
11. What are Echinoderms? The characteristics of Echinoderms?
12. Parasite adaptation?
13. Parasitic Annelids and Roundworms.
14. The advantages of segmentation.