

Practice Questions for Material Covered on Exam 2

You do not have to know all of the material in every chapter listed on the syllabus. To help you pick and choose what to focus on, I have selected the following questions as being most relevant to the material we will cover in class. As you study, try to answer these questions without looking at your book or your notes.

More than any other, this section skips around quite a bit in the book. This list of questions roughly maintains the order in which we will cover the material in lecture.

In the list below, Mastering Concepts, Figure It Out, Multiple Choice, Write It Out, and Pull It Together questions comes from the textbook; answers to those questions appear in the ebook as well.

Chapter 7 – DNA Structure and Gene Function

Section	Question type	Question number(s) or question text
7.1	Mastering Concepts	2
7.1	Other	What is the relationship between an organism's genome, chromosomes, DNA, and genes?
7.2	Mastering Concepts	1, 2, 3

Make a concept map using the following terms: nucleotide, deoxyribose, phosphate, nitrogenous base, adenine, cytosine, guanine, thymine, DNA, nucleic acid, hydrogen bond, double helix

Section	Question type	Question number(s)
7.3	Mastering Concepts	1, 2, 3, 4
7.4	Mastering Concepts	1, 2, 3
7.5	Mastering Concepts	1, 2, 4, 5
7.6	Mastering Concepts	1, 2, 3

Make a concept map using the following terms: gene, codon, mutation, nucleotide, anticodon, protein, mRNA, DNA, tRNA, amino acid, RNA polymerase, nucleus, ribosome

Section	Question type	Question number(s)
7.7	Mastering Concepts	1, 2, 3, 4
7.8	Mastering Concepts	2
7.9	Mastering Concepts	1, 2
7.10	Mastering Concepts	None

Section/page	Question type	Question number(s) or question location
N/A	Figure It Out	Pages 118, 120, 124
End of chapter	Multiple Choice	1, 2, 3, 4, 6, 7
End of chapter	Write It Out	1-15, 16-21

End of chapter	Pull It Together	1, 2, 3, 4
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Make a concept map using the following terms: virus, host cell, genetic material, protein, ribosomes, envelope, ATP, amino acids, nucleotides, attachment, penetration, synthesis, assembly, release

Chapter 8 – DNA Replication, Binary Fission, and Mitosis

Section	Question type	Question number(s)
8.1	Mastering Concepts	1, 2
8.2	Mastering Concepts	1, 2, 3, 4
8.3	Mastering Concepts	1
8.4	Mastering Concepts	2
8.5	Mastering Concepts	1, 2, 3, 4, 5
8.6	Mastering Concepts	1, 2, 3

Section/page	Question type	Question number(s) or question location
N/A	Figure It Out	Pages 142, 146, 147
End of chapter	Multiple Choice	1, 3, 4, 5, 6, 7
End of chapter	Write It Out	1, 2, 3, 4, 5, 7, 8, 10, 11, 12
End of chapter	Pull It Together	1, 2, 3

Make a concept map using the following terms: DNA, replication, DNA polymerase, nucleus, enzyme, nucleotides

Make a concept map using the following terms: centromere, chromosome, chromatid, DNA, nucleus, replication, haploid, diploid, mitosis, cytokinesis, interphase, prophase, metaphase, anaphase, telophase, apoptosis, cancer, protein, binary fission

Chapter 9 – Sexual Reproduction and Meiosis

Section	Question type	Question number(s)
9.1	Mastering Concepts	1, 2, 3
9.2	Mastering Concepts	1, 2, 3
9.3	Mastering Concepts	1, 2, 3, 4
9.4	Mastering Concepts	1, 2
9.5	Mastering Concepts	1, 2, 3
9.6	Mastering Concepts	1, 2
9.7	Mastering Concepts	2, 4, 5

Section/page	Question type	Question number(s) or question location
N/A	Figure It Out	Pages 159 (both), 161, 162
End of chapter	Multiple Choice	1, 2, 3, 4, 5, 6, 7

End of chapter	Write It Out	1, 2, 3, 4, 6, 7, 8, 9
End of chapter	Pull It Together	1, 2, 3, 4

Make a concept map using the following terms: centromere, chromosome, chromatid, homologous, nucleus, haploid, diploid, meiosis, nondisjunction, gametes, fertilization, zygote

Chapter 10 – Patterns of Inheritance

Section	Question type	Question number(s)
10.1	Mastering Concepts	1, 2
10.2	Mastering Concepts	2
10.3	Mastering Concepts	1, 2, 3, 4
10.4, 10.5	Mastering Concepts	None
10.6	Mastering Concepts	1
10.7	Mastering Concepts	1, 2, 3
10.8	Mastering Concepts	None
10.9	Mastering Concepts	1, 2

Section/page	Question type	Question number(s) or question location
N/A	Figure It Out	Pages 176, 182, 185
End of chapter	Multiple Choice	1, 2, 6
End of chapter	Write It Out	1, 2, 6 (except pleiotropy), 7, 8, 9
End of chapter	Genetics problems	1, 2, 3, 6
End of chapter	Pull It Together	1, 2, 3 (except pleiotropy)

Notice that pages 194-195 include a “step-by-step guide” for solving genetics problems.

Make a concept map using the following terms: DNA, cell, gene, allele, phenotype, genotype, homozygous, heterozygous, dominant, recessive, parents, offspring, meiosis, gametes

Chapter 11 – DNA Technology

Section	Question type	Question number(s)
11.1	Mastering Concepts	1, 2
11.2	Mastering Concepts	1, 2
11.3	Mastering Concepts	1, 2, 3, 4
11.4	Mastering Concepts	3

Section/page	Question type	Question number(s) or question location
End of chapter	Multiple Choice	2, 7, 10
End of chapter	Write It Out	1, 8, 9, 10, 12, 14 (gene therapy only)
End of chapter	Pull It Together	4