

42. What is the fate of the introns in pre-mRNA?
- They are translated into polypeptides.
 - They are discarded.
 - They are processed into tRNA.
 - They are converted into exons.
 - They are reused in other pre-mRNA molecules.
43. Two tRNA molecules occupy the P and A sites in a ribosome. The amino acids they carry are joined by a peptide bond. What is the *very next* event that occurs?
- The tRNA in the P site detaches and leaves the ribosome.
 - A third tRNA enters the ribosome.
 - The ribosome moves one codon down the mRNA.
 - The large subunit leaves the ribosome.
 - A new amino acid is joined to the tRNA in the P site.
44. The tRNA molecule has been called an adaptor molecule because:
- It binds to both DNA and RNA.
 - It recognizes both RNA and an amino acid.
 - All tRNA molecules have been modified from mRNA.
 - It binds to both amino acids and DNA.
 - It adapts to changes in the mRNA codons.
45. The quaternary level of protein structure involves: *Discussed in class.*
- folding of the primary structure upon itself
 - the number of peptide bonds in a polypeptide chain
 - substitutions in the amino acid sequence
 - interactions with other polypeptide chains
 - none of these
46. Archibald Garrod's work on alkaptonuria characterized it as an "inborn error of metabolism" causing an abnormal build-up of alkapton. He concluded that the build-up occurred because people with alkaptonuria:
- produce much more alkapton than normal people
 - have an enzyme that normal people do not have
 - cannot convert alkapton into other products, as normal people can
 - have a kidney defect making their urine abnormal
 - produce much more alkapton than normal people *and* have an enzyme that normal people do not have
47. An inherited risk pedigree for the breast cancer gene (BRCA1 or BRCA2) looks much like the pedigree of a(n): *Homework.*
- autosomal dominant mutation.
 - autosomal recessive mutation
 - sex-linked recessive
 - sex-linked dominant
48. Which one of the following correctly describes the direction of translation?
- DNA is read 3'-to-5' and RNA is synthesized 5'-to-3'.
 - DNA is read 3'-to-5' and RNA is synthesized 3'-to-5'.
 - DNA is read 5'-to-3' and RNA is synthesized 3'-to-5'.
 - DNA is read 5'-to-3' and RNA is synthesized 5'-to-3'.
 - The direction varies in different genes.