DNA 16-20 CLICKERS

 1 Which enzyme found in retroviruses like HIV is used to change an RNA message into a complementary
 DNA strand?

 A DNA ligase

 B restriction endonuclease

 C Taq polymerase

 D reverse transcriptase

 E primase

 2 The viral lifecycle in which a bacteriophage injects its DNA into a bacteria, uses the cell's machinery to
 make new phage, then bursts the host cell is called the

 A lytic cycle

 B lysogenic cycle

 C Krebs cycle

 D Calvin cycle

 3 Arrange the following in order used in replication.
 1-PRIMASE 2-HELICASE 3- single stranded binding proteins 4-DNA POLYMERASE

 A 1,2,3,4

 B 1,3,2,4

 C 2,3,1,4

 D 2,3,4,1

 E 2,4,3,1

 4 After initiation starts translation, new amino acids enter the ribosome at which site?

 A) A B) P C) E D) operator

5 ALL of the following are limitations of DNA polymerase EXCEPT

 A It can only add nucleotides to the 3' end of an existing strand

 B It can't start a new strand by itself

 C It can only replicate the leading strand, a different enzyme must copy the lagging strand.

 D It results in the loss of segments of DNA at the ends of the chromosomes every time it copies
 the DNA.

 6 In a nucleosome, the DNA is wrapped around

 A proteasomes

 B histones

 C siRNA's

 D ubiquitin

 7 Which of the following is a difficulty in getting prokaryotic cells to express eukaryotic genes?

 A The genetic code differs because prokaryotes use uracil instead of thymine in DNA

 B The ribosomes of prokaryotes are not large enough to handle long eukaryotic messages

 C Prokaryotic cells cannot process introns because their cells don't have them

 D The RNA splicing enzymes of bacteria work differently than those from eukaryotes

 8 GFP is used as a genetic tool because it can

 A make many copies of a small amount of DNA

 B be used as a marker to tell which bacteria contain recombinant plasmids

 C mark "sticky ends" for endonucleases

 D make bacteria resistant to antibiotics

 9 Use the mRNA codon table. A mutation that changes a codon from UGC to UGA is an example of a
 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mutation.

 A missence

 B nonsense

 C frameshift

 D transduction

 10 Which of the following is true about the lac operon?

 A The addition of lactose turns the lac operon off.

 B The repressor is normally inactive without lactose.

 C Lactose binds to the repressor which turns the lac operon on.

 D The lac repressor binds to RNA polymerase to turn on the genes.

 11 Which of the following is NOT a potential control mechanisms for regulation of gene expression in
 eukaryotes?

 A degradation of RNA

 B transport of mRNA from nucleus

 C lac operon

 D actylation of histones

 E enhancer regions

 12 The action of which enzyme is ensures that chromosomes do not decrease in length with each replication?

 A DNA polymerase

 B DNA ligase

 C primase

 D telomerase

 13 Meselson and Stahl's experiment with labeled nucleotides provided evidence that DNA replicates using
 which method?

 A conservative

 B semi-conservative

 C dispersive

 14 If an operon codes for enzymes for making an essential amino acid and is regulated like the trp operon,
 then

 A the presence of the amino acid activates the repressor

 B the operon is inducible

 C the presence of the amino acid turns on the genes

 D the repressor is active in the absence of the amino acid

 15 Which of the following does NOT occur during RNA processing in the nucleus of eukaryotes?

 A removal of introns

 B addition of a string of adenine nucleotides to the 3' end

 C addition of a guanine cap to the 5' end

 D ligation of exons

 E addition of methyl groups to certain RNA nucleotides

 16 Genetic recombination in bacteria that results from a virus transferring new bacterial genes along with
 its viral genome when it infects a new cell is called

 A conjugation

 B transformation

 C transcription

 D transduction

 17 siRNA's are "death tags" that mark \_\_\_\_\_\_\_\_\_\_\_\_\_\_ that should be destroyed.

 A proteins

 B thymine dimers

 C mRNA's

 D introns

 18 What is the relationship during gel electrophoresis between migration distance and fragment size?

 A Migration distance is independent of DNA fragment size.

 B Longer DNA fragments travel a greater distance than shorter fragments.

 C Migration distance is inversely proportional to fragment size.

 D migration distance is directly proportional to fragment size

 E the heavier the fragment, the greater the migration distance.

 19 Which of the following is NOT a potential control mechanisms for regulation of gene expression in
 eukaryotes?

 A degradation of RNA

 B transport of mRNA from nucleus

 C negative control of operons

 D acetylation of histones

 E enhancer regions

 20 Okazaki fragments

 A form when the leading strand is replicated

 B are copied from the coding strand

 C are joined by primase

 D form when the lagging strand is replicated

 Answer Key : DNA 16-20

 **Question:** **Answer**

 1 D

 2 A

 3 C

 4 A

 5 C

 6 B

 7 C

 8 B

 9 B

 10 C

 11 C

 12 D

 13 B

 14 A

 15 E

 16 D

 17 C

 18 A

 19 C

 20 D

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