Biology - 12th Class Biology Chapter 20 Short Questions Preparation

Q1. Enlist non sense codons and their function.

Ans 1: Non sense condons do not specifiy any amino acid. They are used to terminate or to stop the protein synthesis.Their names are UAA,UGA and UGA.

Q2. Define leading and lagging strand of DNA.

Ans 1: Lagging strand is that strand of DNA which is discontinuously synthesized while the strand of DNA which is continuously synthesized is called leading strand.

Q3. What is transcription bubble? How is it formed?

Ans 1: The DNA strand open at specific place where enzyme is attached to the template strand forming transcription bubble.

Q4. Differentiate between transcription and translation.

Ans 1: **Transcription:** it is the first step of protein synthesis,in transcription mRNA is synthesized from DNA.

Ans 2: **Translation:** It is the second step of protein synthesis in which DNA message for protein synthesis is decoded and polypeptide chain is synthesized.

Q5. Give chromosomal theory of inheritance.

Ans 1: According to this theory,genes are located on chromosomes. At the time of cell division all the genes which are present on a chromosome,will go to same cell in which cell chromosome is transported.

Q6. Define transcription.

Ans 1: Syntheis of mRNA from the DNA is called transcription.It is first step of central dogma.

Q7. What are mutagens? Give one example.

Ans 1: In genetics,a mutagen is a physical or chemical agent that changes the genetic material,usually DNA of an organism and thus increases the frequency of mutations.
For Example: X-ray,ultraviolet radiations etc.

Q8. Differentiate between sense and anti sense strands of DNA.

Ans 1: **Sense strand;** The strand of DNA which is opposite to the antisense strand and is not transcribe is known as sense strand or coding strand.

Ans 2: **Anti-sense strand:** Only one of the two strands of DNA are transcribed. This strand is called template strand or the antisense strand

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Q9. What is tRNA? Give its role.

Ans 1: tRNA is a type of RNA which is 70 to 90 nucleotides in length. It transfers amino acids during the protein synthesis to the place where protein is synthesized in the cell.

Q10. How many chromosomes are present in mouse and sugar cane?

Ans 1: Sugar can has 80 while mouse has 40 chromosomes respectively.
