VU Medical Zone

BIF 101 Midterm M.C.Q

Lecture 1 to 50

1. Which is of the following is the basic unit life? **Cell**

2. _____ is the tendency of an atom to attract electrons towards itself. **Electronegativity**

3. How many_____ % of human body consist of water? **70 %**

4. Which kind of reaction is Monomers join H2O Removal? **Condensation**

5. ____ refers to the biology of the molecules related to genes, gene products and heredity. **Molecular Biology**

6. Who synthesis urea in 1828? **Friedrich Wohler**

7. The first enzyme_____ was discovered by Anselme Payen in 1833. **Diastase**

8. DNA was discovered by_____. **Friedrich Miescher**

9. James Watson and Francis Crick discovered the double helical structure of DNA in _____. **1953**

10. Marshall Nirenberg and Gobind Khorana found that 3 bases constitute a code word, called a___. **Codon**

11. The Human Genome Project (HGP) was launched in **1990** and completed in **2003**.

12. How many components are present in a nucleotide? **Three**

13. The successive nucleotides of DNA are joined together through_____. **Phosphodiester linkages**

14. _____ deals with movement of genes and genetic traits from parents to offspring. **TRANSMISSION OR CLASSICAL GENETICS**

15. _____ is the field in which computational and statistical techniques are applied to derive biological information from genome sequences. **Genome informatics**

16. Which one of the following is or is not a model organism?

17. _____ are the organisms whose Genetic material (DNA) is not enclosed in a nuclear membrane. **Prokaryotes**

18. Which one of the following is evolved from a bacterial endosymbiont? **Mitochondria**

19. Which one is First prokaryotic Genome was sequenced? **Hemophilus influenza**

20. The genome size of E. coil in_____ mbp. **4.6**

21. Alkaptonuria is most common in children whose parents were first cousins_____. **12.5%**

22. **RNA** molecule forms complimentary copy of one DNA strand, moves to cytoplasm serves as template for protein synthesis.

23. Human consist of how many genes? **25000**

24. Genetic information flows from **DNA to RNA** to protein during cell growth.

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25. flow of information from RNA "backwards" to DNA is possible in certain special circumstances due to the operation of_____. **Reverse transcriptase**

26. The correct sequence of central dogma. **DNA - RNA - Protein**

27. Which on of the following is a stop codon? **UAA, UAG, UGA**

28. tRNA has **75-80** nucleotides with internal H- bonding.

29. In DNA the Adenine always pair with_____. **Thymine**

30. Which one of the following is not present in DNA? **Uracil**

31. _____ is the type of RNA that carries genetic information from DNA to the protein biosynthetic machinery of the ribosome. **mRNA**

32. The process of forming mRNA on a DNA template is known as_____. **Transcription**

33. Which type of RNA serve as adapter molecules in the process of protein synthesis. **tRNA**

34. rRNA is a predominant material in the ribosomes constituting about **60%** of its weight.

35. The protein-coding region(s) of each mRNA is composed of a contiguous, nonoverlapping string of codons called _____. **Open reading frame (ORF)**

36. mRNAs containing multiple ORFs are known as_____. **Polycistronic RNAs**

37. A ribosome that has just completed translating the upstream ORF is positioned to begin translating from the start codon for the downstream ORF. **Translational coupling**

38. The heart of protein synthesis is the "**translation**" of nucleotide sequence information.

39. tRNA molecules are between **75 and 95** ribonucleotides in length.

40. Pseudouridine is derived from uridine by an isomerization in which the site of attachment of the uracil base to the ribose is switched from the nitrogen at ring position **1** to the carbon at ring position **5.**

41. The large subunit contains the **peptidyl transferase center**, which is responsible for the formation of peptide bonds.

42. The **A-site** is the binding site for the aminoacylated-tRNA.

43. **P-site** is the binding site for the peptidyl-tRNA.

44. The **E-site** is the binding site for the tRNA that is released after the growing polypeptide chain has been transferred to the aminoacyl-tRNA.

45. The **ribosome** catalyzes a single chemical reaction — the formation of a peptide bond.

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