

# Molecular

## Serotonin 2017

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الطبيب الجراحة  
لجنة  
القلب

*1.separation the two template of dna in replication done by?*

***Helicase***

*2.which type of the histone bind nucleosome to dna?*

***H1***

*3.the content of A-T is 40%,,what is the amount of Guanine?*

***%30***

*4.which of the following pairs of structure has the same amount of dna?*

***A.an unreplicated chromosome and chromatid***

***B.a replicated chromosome and a sister chromatid***

***C.a replicated chromosome and a bivalent***

***D.an unreplicated chromosome and a bivalent***

***Answer:A***

*5.with regard to their chromosomes,what is a major difference between prokaryotes and eukaryotes?*

***Eukaryotes have linear chromosome while most prokaryotes contain a single circular chromosome***

*6.the spindle fibers associated with?*

***Kinetochores***

*7.what is the application of the karyotype?*

***Genetic disorders caused by chromosomal rearrangement can be identified***

*8.characteristic of mitochondria ?*

***Does not reshuffle from one generation to next***

*9.difference between G1 and G2 phases?*

***Chromosome in G2 has 2 linear pieces of dna while G1 has one***

*10. Clinical case, symptoms include; cardiovascular issues, sexual retardation and webbed neck?*

*Turner syndrome*

*11. where would you find telomeres?*

*Human chromosome*

*12. the repair system when we remove base segment from E. coli?*

*Nucleotide excision repair*

*13. we can take a DNA sample from all of this except?.*

*RBCs*

*14. the major groove of C;G?*

*HDAA*

*15. the correct nitrogen bases sequence in human's telomeres is?*

*TTAGGG*

*16. removing the supercoiling in DNA replication done by?*

*Topoisomerases*

*17. the DNA ligase in DNA replication;*

*Make phosphodiester bond between 3-oh from okazaki and 5-p from next lagging strand*

*18. removing the primer done by?*

*Rnase*

*19. which of the following is not true about Z-DNA?*

*Major groove narrow but very deep*

*20. about helix – turn – helix.?*

*A2 and a3 are held together at about 90 degree to each other by four amino acid*

## **FINAL**

**1. which of the following statement is correct?**

- A. Cell communicate with one another in multicellular organisms using extracellular signaling molecules or hormones**
- B. Cell communicate with one another in unicellular organisms using extracellular signaling antigen and antibody**
- C. Cell communicate with one another in multicellular organisms using intracellular signaling molecules only**
- D. Cell communicate with one another in unicellular organisms using extracellular signaling antigen and antibody**

**ANSWER: A**

**2. the binding of ligand to many G-proteins linked receptors leads to?.**

- A. increase in the concentration of certain intracellular signaling molecules called second messenger**
- B. decrease in the concentration of certain intracellular signaling molecules called second messenger**
- C. increase in the concentration of certain intracellular signaling molecules called first messenger**
- D. decrease in the concentration of certain intracellular signaling molecules called first messenger**

**ANSWER: A**

**3. about thiamine's carbon the correct statement is?**

- C1 bind to sugar, C2 not binding, C3 to c1 in adenine, C4 to c6 in adenine**

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مع أمنياتنا بالتوفيق والنجاح  
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