Biology Worksheet for grade 11

Genetics

I. Choose the correct answer

1. The specificity of a gene is determined by the sequence of

A) sugar molecule B) base molecules C) phosphate molecule D) phosphate and sugar molecule

2. the set of chromosome that we inherit from one of our parents is called

A) diploid B) homologous C) haploid D) polyploidy

3. suppose double stranded DNA molecule consists of 1000 bases with 100 adenine base, the number of other bases would be

A) 100 guanine, 400 cytosine & 400 thymine B) 450 guanine, 450 cytosine & 10 thymine

C) 400 guanine, 100 cytosine & 400 thymine D) 400 guanine, 400 cytosine & 100 thymine

4. which one of the following is commonly called the code of life?

A) organelles B) RNA C) nucleus D) DNA

5. what is the function of DNA polymerase? It

A) hydrolyzes the DNA molecule B) form DNA by joining nucleotides

C) converts the DNA molecule to RNA D) join two RNA molecules to form DNA molecule

6. if one strand of DNA molecule contains ATGCC bases, the complementary strand will contain

a) TACGG b) CCGTA c) GGCAT d) GCATT

7. which of the following best explains the origin of sister chromatids?

A) paring between two homologous chromosomes B) chromosome replication

C) splitting of chromosomes into two half D) joining of centromere into four

8. chromosomes are important in heredity because they

A) are located in the nucleus B) have trade like shape C) contain histone D) they compose DNA

9. what distinguishes meiosis from mitosis?

A) doubles the number of chromosomes B) reduce the number of chromosomes by half

C) increase the number of chromosomes D) does not alter the number of chromosomes

10. which of the following are the two major constituents of eukaryotic chromosome?

A) DNA and RNA B) DNA and protein C) RNA and phosphate D) DNA and sugar

II. Fill the blank

1. The two chemical families of nucleotide bases are---------- and ----------
2. The enzyme in DNA replication the join the two strands of DNA is called----------
3. The stage of interphase where accumulation of building blocks take place is called---------
4. In the process of cell division the division of nucleus in to two is known as----------

III. Short answer

1. The double helix model is presented by the two scientists. Name them.
2. Bases in the nucleotide are connecting the two strands. Which of the base pairs are connected by double hydrogen bond?
3. Mention three structural features of RNA?
4. What is cell cycle?