**Mid-Term Assignment (Summer-2020) (BS-MLT)**

**Course Title: Human Genetics Instructor: Mr. Fazli Zahir Mian**

**Time: 4 Hours**

**Q1: Fill in the Blanks.**

1. The tendency of offspring to resemble their parents is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is known as the father of modern genetics.
3. Interphase chromatin consists of about **\_\_\_\_\_\_\_\_\_\_\_\_\_%** DNA, **\_\_\_\_\_\_\_\_\_\_\_\_\_%** protein and **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_%** RNA.
4. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_is an organized structure of DNA and protein found in cells.
5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are two identical copies of the chromosome connected by a centromere.
6. The region where two sister chromatids of a chromosome appear to be joined during cell division is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
7. The **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** is the protein structure on chromosomes where the spindle fibers attach during cell division to pull the chromosomes apart.
8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_are unique feature of eukaryotic chromosome.

**Q2: Write short notes on the following**

1. Chromosome and gene
2. Allele and forms of alleles
3. Genotype and phenotype
4. Homozygous and heterozygous
5. Centromere and telomere

**Q3: What is Genetics? Discuss in detail the application of genetics**

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Good luck.