**MCQ/Objective type questions:**

1. Which one is the largest component of DNA among the following:
2. Nucleoside b. Purine base
3. **Nucleotide**  d. Pentose sugar
4. State TRUE or FALSE for the following statements:

A. One complete turn of a DNA double-helix measures 3.6 nm. **TRUE**

B. DNA is a double stranded right handed helix **TRUE**

C. DNA is less stable than RNA and protein **FALSE**

D. DNA is negatively charged **TRUE**

1. In DNA double helix, the two DNA chains are held together by
2. covalent bonds between the pair of bases
3. **hydrogen bonds between the pair of bases**
4. ionic bonds between the pair of bases
5. none of the above
6. In the study of one experiment, it was found that the value of Tm for DNA is = 60° C. If that DNA sample has 30% GC at the above Tm, then what will be the value of ' Tm' if the GC% increases to 50%?
7. **Increases** b. Decreases c. Remains same d. Can’t be predicted
8. If one DNA sample has 40% AT content, what will be the percentage of Guanine residue in that DNA sample?

**30%**

1. The sequence of one strand of DNA is 5’ TCGATCCA 3’. What will be the sequence of the complementary strand (Please include the direction of the strand)

**3'AGCTAGGT 5'**

1. In Griffith's experiment \_\_\_\_**DNA**\_\_\_\_ from smooth strain bacteria caused rough strain bacteria to be transformed.
2. State TRUE OR FALSE for the following statements regarding Griffith’s experiments (S=smooth, R=rough):
3. S strain bacteria killed the mice **TRUE**
4. R strain bacteria killed the mice **FALSE**
5. heat-killed S strain bacteria killed the mice **FALSE**
6. a mixture of heat-killed S strain bacteria and live R strain bacteria killed the mice **TRUE**

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