Assignment 1

7/Mar/2020

1. Write a code to accept any DNA sequence (of varying lengths) and produce as output the corresponding RNA strand synthesized and protein strand synthesized?

Sample DNA sequence:

gtttcattataccagtttagatctatcgacagggcgttgagtgtgtgcttactcacggct

ggcatgtaggtaacagtagtggggaagcgtaacatctgaggcctgactcacatatagagt

gtcgaccaaggggtgaagcatcatacgccatacaggcccctagcgaaacgacctagtcta

aagacacacgagaatgaaacccgtggacttggttacagcgtaataatctggtcagagctg

gtccggcgctggcgatgtaccttacgccactgcaaaccggctttgcagagaacatctggg

tacattcccgtgtcatgtcaaagcaggtgattcccgcgaaaaacaattaacgacgcattt

gctattgacgaagtcctagttctccgaattgagcgggagacatatgatgtcgagactgca

ggaaccgaattatcctgtccgcagatccaatagctcacagaggtaaggggagtgtgatgg

tgccctagggtgtttgaacg

1. Is Taxonomy a constant nomenclature for a species? Give reasons for your answer.
2. Give the taxonomy classification of humans. Are there any other species with Genus – Homo? Mention them.
3. What observations did Charles Darwin make during his voyage across Galapagos islands?
4. What are the roles of repressors and activators in a gene?
5. What do you mean by alternative splicing and alternative initiation?
6. What kind of biological data analysis can help in testing and in finding solutions for treatment options for combating COVID19?

Deadline for submission: 14/Mar/2020

The program should be uploaded. Execution/evaluation will be done on a specified date.

Handwritten solutions have to be submitted for all other questions.

Assignment can be submitted at TA office – B2 301.