



COMSATS UNIVERSITY ISLAMABAD
DEPARTMENT OF Computer Sciences
MIDTERM EXAM FA25

Course instructor	Dr. Sadaf Azad Raja	Course	Introduction to Bioinformatics
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Date of the exam	29-10-2025	Marks	30

*Cutting/erasing is not allowed in objective part of the paper. Solve the long questions on the answer book only.

Q1. fill in the blanks

- Genes are the exonic regions of the DNA
- The process of making copies of DNA is called replication.
- The mRNA is synthesized on the complementary strand of the DNA.
- Stop codons are UAA, UAG and UGA.
- Every Eukaryotic mRNA has a first codon AUG and the first amino acid methionine incorporated in the start of every protein is Methionine.
- tRNA is similar to the complementary strand of the DNA except it has Uracil instead of Thiamine.
- mRNA is protected by GTA on the 5'UTR and poly a tail at the 3'UTR.
- Gene is predicted by the presence of Adanin, Uracil and thyamine on the coding strand.
- The coding region of a gene has two components exon and intron.
- If mRNA has been interrupted by a exonic / sp codon it is called non sense ORF.

Q2. Choose the best answer

- DNA has Three reading frames on one strand.
 - ☒ Three
 - ☐ Six
 - ☐ -1, -2, -3
 - ☐ +1, +2, +3
- The anti code on tRNA carrying methionine is
 - ☐ ATG
 - ☐ AUG
 - ☒ UAC
 - ☐ UAA
- Protein interaction database is
 - ☐ KEGG
 - ☐ GenBank
 - ☐ STRING
 - ☒ PDB
- mRNA can have Three ORF/s
 - ☐ Many
 - ☐ Two
 - ☒ Three
 - ☐ one
- The secondary database is Unique
 - ☐ Basic
 - ☒ Unique
 - ☐ Curated
 - ☐ Wet lab data