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| Salahaddin University-Erbil |  | Subject: Molecular biology |
| College of Education | Stage:4th |
| Department of Biology | Time: 1 Hours |
|  | Date: 10 /3 / 2024 |
| Midterm exam – second course –Academic Year (2023- 2024) | | |

**Q1/**Fill the following with scientific words: -

1-The small subunit function is -------------------------- and -------------------------------

2-The process of abortive initiation allow RNA polymerase to check for -------------------- and ----------------

3-The synthesized RNA is proof read by ------------------- and --------------enhance this process.

4- The first event in eukaryotic initiation transcription is the binding of ----------- to the ---------------- via subunit called --------------------

5-The RNA before modification called -------------,-----------------,-----------------and ----------------------

6-The eukaryotic mRNA is capped at 5’end with ----------------- through ---------------bond

7-Eukaryotic gene composed of ---------------which code for protein and ------------that don’t code for protein while splicing is ---------------------------------------

8-In prokaryote mRNA cells start with--------------or ------------------that contain -----------------also known as ----------------.

9-Coding region begin with start codon ---------------and end up with stop codon -------------,---------,--------------

10-The S in 70 S refer to --------------which stand for ---------------it helps to determine the --------and -----------

(40Marks)

**Q2/**Correct the bold sentences:

1-In β subunit responsible for **DNA binding**

2- The newly synthesized RNA is exit from **promoter site**

3-**TFIID** bind to RNA polymerase II and act as bridge

4-Supply of methyl group in capping process come from **cap binding protein**

5-The enzyme **gyanylyl transferase** add adenine nucleotide during adenylation

6- lariat structure form during **capping process**.

7- Euokaryotic Mrna is **polycistronic**

8-mRNA accounts for just **8%** of the total RNA in the cell

**9-**The acceptor arm has **AAG** sequence

10- Prokaryotic ribosome is **80S**  ( 20 Marks).

**Q3/** Give full name for the followwing:

1. A-site, 2- ORF 3- 5UTR 4-Snurp 5- P-site ( 20 marks)

**Q4**/ Write the steps of splicing process by spliceosome (20 marks)

**Dr.Zirak F.A. Abdulrahman**