

# **Virtual University of Pakistan**

**Bio302**

## **Molecular Biology**

**Final term Past Papers**

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**Course Instructor**

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**Created By**

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**Group of VU Biologists**

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## Bio302

Today 302 paper two use of nitrogen mustered gas.

Kind of bond with the potential for hydrolytic cleavage DNA.

What are psi and phi values in a helix structure and mention value.

How many classes of splicing found in cell.

Transition to open complex. What are the two RNA polymerase present in the eukaryotic other than RNA pol II and how they differ from RNA pol II

Questions:

Nuclear Scaffold, bacterial core Enzyme

What will happen to cellular machinery and function if pyrimidine dimer is not removed?

Some MCQs:

CTD have series of repeats.....?

Pyrimidine dimers are formed by..... UV light, Infra-red???

Suicide Enzyme.....???

Miss pair nucleotides per 100000 or  $10^5$

MuTS Homologs

5' Splice site recognize by U1 snRNP and U6 or opposite ???

Inchworming???

E. coli predominant Sigma factor

Cells are preferred to grown in N14, P, Cs, R, S??

ssDNA is needed for RNA helicase, DNA helicase, RNA helicase winding, RNA helicase unwinding???

Indel Mutation is caused by ( reagent ) ????

Mismatch repair system ????

Mutation  $k_i$  type

Splicing  $k_i$  type

Template primer junction

Secondary structure of RNA

termination sequence

Function of RNA polymerase

How RNA polymerase 2 differ from 3,1

Transition to open complex in transcription

spliceosome

Major and minor groove

Disulfide bond

Intron splicing I and RNA processing event

Differentiate endo and exo nucleases causing agent

C-terminal tail 117

Elongated polymerase tail 118

Highly regulated level of transcript tail 116

Torpedo model tail 119

two use of nitrogen mustered gas.

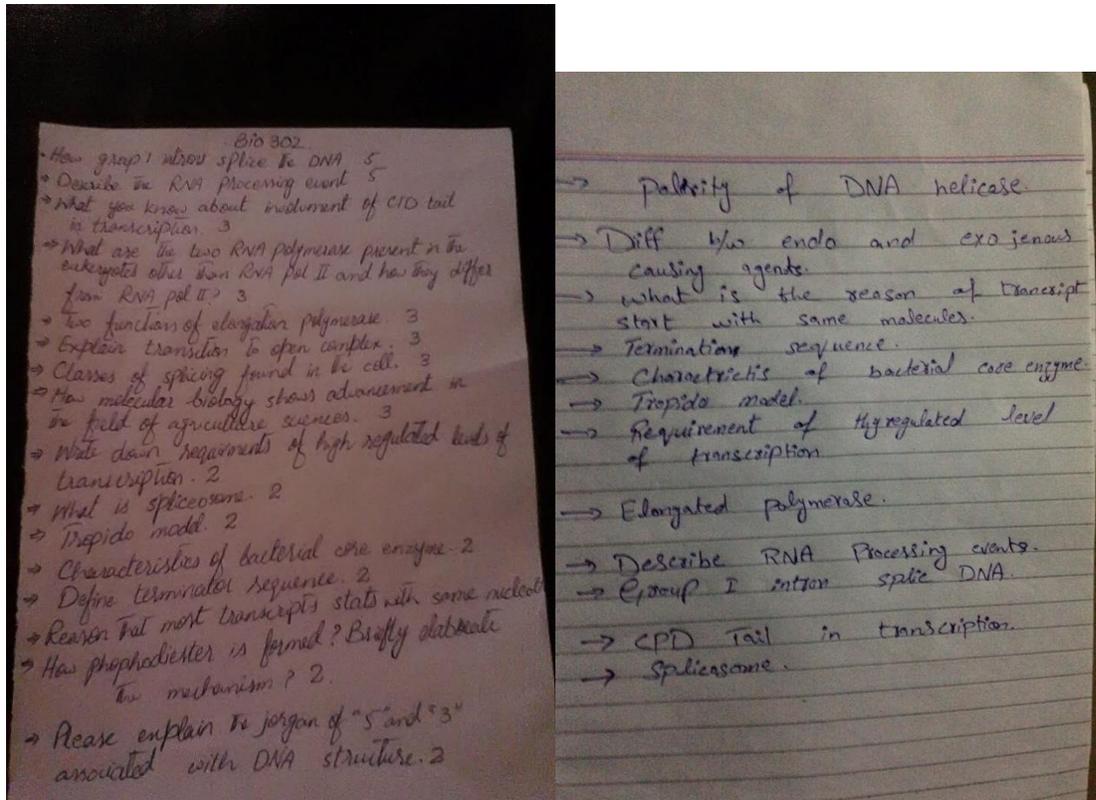
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What are the two RNA polymerase present in the eukaryotic other than RNA pol II and how they differ from RNA pol II



- ⇒ Semiconservative replication.  
 ⇒ Three common source where PAH is formed.  
 ⇒ Reasons that transcripts start with same nucleotide.
- ⇒ RNA processing event.
  - ⇒ CTD tail in transcription.
  - ⇒ Two RNA polymerase present in eukaryotes other than RNA Pol II and how they differ from RNA Pol II.
  - ⇒ Elongation Polymerase.
  - ⇒ Transition to open complex.
  - ⇒ How many classes of splices found.
  - ⇒ Water-mediated deamination convert cytosine, guanine and adenine into which Nitrogenous base.
  - ⇒ Requirement of high regulated level of transcription.
  - ⇒ Spliceosome.
  - ⇒ The Tripartite model.
  - ⇒ Characteristics of bacterial core enzyme.
  - ⇒ Terminator sequence.

CRISPR stands for? 2 marks

Terpedo model. 2 marks

mRNA has short life span write experiment. 3 marks

Operon model? 5 marks

Group 1 intron splicing. 3 marks

Splicing. 5 marks.

Gene expression controlled by regulatory proteins. 10 marks

RNA editing explain. 10 marks.

mRNA short life experiment

intron splicing 1

CRIspr stand For

enlist th name of splicing method

.terminator sequence

Spliceosome pathway..differnt pathway

CRISPR. .application

splicing 10

gene expression 10

crisp stand for 2

mRNA with experiment 5

tedo model

torpedo model?

CRISPR stands for?

mRNA has short life span write experiment

1 short yaad nhi aara.. 😞:/ 😊:P

long 5 marks:

operon model?

group 1 intron splicing.

long 10 marks

splicing

gene expression controlled by regulatory proteins.

mcqs tough thy.. mostly enzymes aurstrands k baary mai thy.

short qustn:

CRISPR stand for? (2)

terminating squence? (2)

mRNA span short time (3)

RNA processing event? (5)

opendro model? (5)

long qustn:

gene of expression (10)

RNA editing. (10)

Write down the requirements of high regulated level of transcription?

CRISPRs stand for?

mRNA has short life span?

spliceosome?

Describe RNA processing event?

:Explain Operon model?

RNA editing explain?

What is CRISPRs? work? application?

Crispr

Crisper+ it's work +applications (10marks)

RNA elongation(10marks)

Operon model

Spliceosome

Write down the requirements of high regulated level of transcription?

CRISPRs stand for?

mRNA has short life span?

spliceosome?

Describe RNA processing event?

Explain Operon model?

RNA editing explain?

What is CRISPRs? work? Application

What is CRISPRs

What is spliceosomes

What is toledo model

Enlist slide pathways and describe It individually

Describe RNA process events

Describe operon model in 5 points

What is crsps??how does it works?? What r its implications and applications

CRISPR stands? 2

Torpedo model 2

RNA has short life span. Explain experiment. 5

What are spliceosome? 3

Operon model. 5

How transition to open complex work? 3

Note on CRISPR? 10

SPLICING PATHWAY

A302. 18/8/2017

CRISPRs .

Name two proteins found in E.coli.2 mrKs

Gene regulation. 10mrks

Lac opern. 5marks

Initiation complex..3mrks

RNA editing 10mrks.

Mcqs bhoot ajeeb bs 2 3 mcqs past sy ay. R

Bio 302

Most important questions for Bio 302

Q.CRISPR stands for? 2 marks

Q.Terpedo model. 2 marks

Q.mRNA has short life span write experiment. 3 marks

Q. Operon model? 5 marks

Q. Group 1 intron splicing. 3 marks

Q. Splicing. 5 marks

Q. Gene expression controlled by regulatory proteins. 10 marks

Q: RNA editing explain. 10 marks

Q.terminator sequence 2 marks

Q.RNA processing event? (5)

Q.What is spliceosome? 2 marks

Q: What is CRISPRs? work? application? 10 marks

Q. : Write down the requirements of high regulated level of transcription? 5 marks

Q. RNA elongation (10marks)

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## Bio 302,,,5pm

write two protein name in E.coli use for lactose.(2)

CRISPR stands for?(2)

write name of splicing classes.(2)

what factors required for transcription in eukaryotes?(3)

how RNA has short life span?write experiment(3)

write five points of operon model.(5)

write RNA processing events.(5)

write note on splicing pathway(10) how gene expression effect on regulatory protein(10)

gd luck to all ☐

## Bio 302

Mujhey CRISPR protein waly 2 question aye or ak RNA processing or ak operon model or ak translation or ak mRNA per note ak splicing process or iss ki types or ak open complex wala?

## Bio 302

Bio 302 8 am (final term)

Splicing pathway... CRISTR STANDS FOR??? termination in short... Rna processing .. rna has short life span so how we can analyzed through what process fr elongation short

Operon modelbs yhi yad

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302. 18/8/2017

CRISPRs .

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Operon modelbs yhi yad

#subject: #bio302

12/08/2017

#final #term #paper

Q----1----Crspr stands for?

Q----2-----Operon model?

Q-----3-----Gene regulation?

Q-----4-----Splicing pathways?

Q-----5-----Splisosome?

Q-----6-----Short life of mRNA?

Q-----7-----Ctd tail?

## Bio 302

what is the role of regulatory 13/8 time 8:00 am

Rna processing mechanism

Rna editing

Gene expression

Operon model

Crispr stands for

Types of splicing explain its two elements ?

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write two protein name in E.coli use for lactose.(2)

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## Bio 302

302 2:30 pm  
CRISP STRANDS FOR .....2  
Torpedo model.....2  
CTD tail .....2  
mRNA has short life span with experimnt.....3  
RNA editing.....3  
Lac operon model explainbin five points.....5  
How grp 1 splicing work in DNA .....5  
How gene expression controlled by regulatory protein.....10  
Ek qstn bhul gya

## Bio 302

Bio 302,

08:00, 19 Aug 17

Describe Terminate sequence ? 2

CRISPRs stands for ? 2

Two protein in E.Coli that are necessary for lactose metabolism? 2

How many classes of splicing found in the cell. Enlist, 3

mRNA short life spam, Name of Experiment, description of Experiment? 3

RNA processing events? 5

Operon Model ? 5

CRISPRs stands for, its work, application & implication of them ? 10

Splicing pathway, discuss individually? 10

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Bio 302

Bio 302 final term 08:00 , 20 aug

MCQs+ Subjective

36) any DNA molecule that has the ability to replicate in an appropriate host cell to which the desired gene are integrated for cloning is called as a) plasmid b) linker c) vector d) adaptor

35) regulatory domains of most activator interact with the

a) transcription factor complex b) RNA polymerase c) repressor d) regulatory factor complex

34) which type of transcription termination requires formation of stem loop secondary structure in RNAs?

a) p dependent b) p independent c) p independent & p dependent d) polymerase independent

33) which is the main function of tRNA in the relation of protein synthesis

a) inhibit protein synthesis b) proofreading c) identities amino acid d) identities amino acid and transport to the ribosome

32) in context with the mechanism of RNA editing one important clue about the mechanism of RNA editing is that partially edited transcripts have been isolated and these are always edited at their

a) 5' end not 3' end b) 3' end not 5' end c) both 5' end , 3' end d) neither 5' end nor 3' end but middle

31) eukaryotic cells always use ----- as the start codon.

a) 5'AAG3' b) 5'AUC3' c) 5'AUG3' d) 5'TUG3'

30) a variable loop sits b/w anticodon loop and the T loop and its name implies,

a) varies in size from 2 to 20 bases b) varies in size from 4 to 22 bases c) varies in size from 3 to 21 bases d) varies in size from 5 to 23 bases

29) the small subunit of ribosomes contains the ----- content in which charged tRNA read or ----- the codon units of the mRNA

a) encoding, encode b) decoding, decode c) catalytic, catalysis d) production, producers

28) it is supposed that in ribosomes peptidyl transferase is entirely composed of

a) DNA b) RNA c) proteins d) lipids

27) due to failure in proper nascent polypeptide process and folding the accumulation of toxic proteins which result from misfolding may lead to several neurological disorders all the following except:

a) Alzheimer disease b) Huntington disease c) Parkinson disease d) Creutzfeldt-Jacobs syndrome

26) CRISPRs consist repeat sequence ----- long ..... (mazed 2 lines ke statement or b the)

a) each 10 bp b) each 20 bp c) each 30 bp d) each 40 bp

25) although mRNA short life time may seem wasteful it has

a) an important catalytic function b) an important regulatory function c) an important survival function d) an important revolutionary function

24) Monod and Jacob proposed the operon model in 1961.

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23) in catabolite repression the system requires for proteins which following of the two are also component of other sugar transportersystem and therefor are unlikely to be direct participates in a glucose specific phenomenon ?

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a) 4 structural gene designated as trp D, trpC ,trpB, trpA, b) 5 structural gene designated as trpE, trp D, trpC ,trpB, trpA c) 6 structural gene designated as trpF, trpE, trp D, trpC ,trpB, trpA d) 7 structural gene designated as trpG, trpF, trpE, trp D, trpC ,trpB, trpA

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Subjective

37)CRISPRs stands? 2m

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39)E. coli proteine name 2m

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