

Code No: R05222303

**R05**

**Set No. 2**

**II B.Tech II Semester Examinations, December 2010**  
**MOLECULAR BIOLOGY**  
**Bio-Technology**

**Time: 3 hours**

**Max Marks: 80**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

\*\*\*\*\*

1. What is the process, which correlates the base sequence present in an mRNA and the amino acid sequence in the final protein molecule? Describe it. [16]
2. Justify the statement-“More copies of genomic DNA can be generated efficiently through rolling circle replication”. [16]
3. What are RNA polymerases? Add a note on their role in Eukaryotic & Prokaryotic transcription process. [16]
4. Write a note on how tRNA is produced by processing larger pre-tRNA transcript. [16]
5. What is the mechanism & importance of “proof reading” function of DNA polymerase in DNA replication? [16]
6. Describe the process of gene transfer method in bacteria where bacteriophages are involved as an intermediate. [16]
7. What is meant by “A-Form”, “B-Form” & “Z-Form” of DNA? [16]
8. Describe site directed mutagenesis as one of the most established techniques in in-vitro mutagenesis. [16]

\*\*\*\*\*

Code No: R05222303

**R05**

**Set No. 4**

**II B.Tech II Semester Examinations, December 2010**  
**MOLECULAR BIOLOGY**  
**Bio-Technology**

**Time: 3 hours**

**Max Marks: 80**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

\*\*\*\*\*

1. What is the process, which correlates the base sequence present in an mRNA and the amino acid sequence in the final protein molecule? Describe it. [16]
2. What is the mechanism & importance of “proof reading” function of DNA polymerase in DNA replication? [16]
3. Describe site directed mutagenesis as one of the most established techniques in in-vitro mutagenesis. [16]
4. Write a note on how tRNA is produced by processing larger pre-tRNA transcript. [16]
5. What is meant by “A- Form”, “B-Form” & “Z-Form” of DNA? [16]
6. What are RNA polymerases? Add a note on their role in Eukaryotic & Prokaryotic transcription process. [16]
7. Justify the statement-“More copies of genomic DNA can be generated efficiently through rolling circle replication”. [16]
8. Describe the process of gene transfer method in bacteria where bacteriophages are involved as an intermediate. [16]

\*\*\*\*\*

Code No: R05222303

**R05**

**Set No. 1**

II B.Tech II Semester Examinations, December 2010

**MOLECULAR BIOLOGY**

**Bio-Technology**

**Time: 3 hours**

**Max Marks: 80**

**Answer any FIVE Questions  
All Questions carry equal marks**

\*\*\*\*\*

1. What is the process, which correlates the base sequence present in an mRNA and the amino acid sequence in the final protein molecule? Describe it. [16]
2. What are RNA polymerases? Add a note on their role in Eukaryotic & Prokaryotic transcription process. [16]
3. Describe site directed mutagenesis as one of the most established techniques in in-vitro mutagenesis. [16]
4. Write a note on how tRNA is produced by processing larger pre-tRNA transcript. [16]
5. Describe the process of gene transfer method in bacteria where bacteriophages are involved as an intermediate. [16]
6. What is meant by "A- Form", "B-Form" & "Z-Form" of DNA? [16]
7. Justify the statement- "More copies of genomic DNA can be generated efficiently through rolling circle replication". [16]
8. What is the mechanism & importance of "proof reading" function of DNA polymerase in DNA replication? [16]

\*\*\*\*\*

Code No: R05222303

**R05**

**Set No. 3**

**II B.Tech II Semester Examinations, December 2010**

**MOLECULAR BIOLOGY**

**Bio-Technology**

**Time: 3 hours**

**Max Marks: 80**

**Answer any FIVE Questions  
All Questions carry equal marks**

\*\*\*\*\*

1. What is the mechanism & importance of “proof reading” function of DNA polymerase in DNA replication? [16]
2. What is meant by “A- Form”, “B-Form” & “Z-Form” of DNA? [16]
3. Describe the process of gene transfer method in bacteria where bacteriophages are involved as an intermediate. [16]
4. What are RNA polymerases? Add a note on their role in Eukaryotic & Prokaryotic transcription process. [16]
5. Write a note on how tRNA is produced by processing larger pre-tRNA transcript. [16]
6. What is the process, which correlates the base sequence present in an mRNA and the amino acid sequence in the final protein molecule? Describe it. [16]
7. Describe site directed mutagenesis as one of the most established techniques in in-vitro mutagenesis. [16]
8. Justify the statement-“More copies of genomic DNA can be generated efficiently through rolling circle replication”. [16]

\*\*\*\*\*