Code No: R05412301 **R05** **Set No. 2**

IV B.Tech I Semester Examinations, November 2010
COMPUTATIONAL MOLECULAR BIOLOGY
Bio-Technology

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) What are the differences between the initial phases of BLAST and FASTA?
   (b) Briefly describe how the PAM and BLOSUM scoring matrices are derived and how they are different. [8+8]
2. Explain about word or k-tuple methods, used by programs FASTA & BLAST? [16]
3. Transmembrane proteins are important in drug discovery
   What are their properties and how can we generate their 3-D structures. [16]
4. What are the different methods used for detecting SNPs and give its applications? [16]
5. Write short notes on the following :
   (a) Weighted parsimony
   (b) Unweighted Parsimony. [8+8]
6. Describe the process of developing spotted arrays? [16]
7. How can you predict protein structure using Ramchandran's plot? [16]
8. Describe about Jukes - Cantor model for estimation of substitution numbers. [16]

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Code No: R05412301 **R05** **Set No. 4**

IV B.Tech I Semester Examinations, November 2010
COMPUTATIONAL MOLECULAR BIOLOGY
Bio-Technology

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. Explain about word or k-tuple methods, used by programs FASTA & BLAST? [16]
2. Describe about Jukes - Cantor model for estimation of substitution numbers. [16]
3. Write short notes on the following :
   (a) Weighted parsimony
   (b) Unweighted Parsimony. [8+8]
4. What are the different methods used for detecting SNPs and give its applications? [16]
5. Transmembrane proteins are important in drug discovery
   What are their properties and how can we generate their 3-D structures. [16]
6. Describe the process of developing spotted arrays? [16]
7. (a) What are the differences between the initial phases of BLAST and FASTA?
   (b) Briefly describe how the PAM and BLOSUM scoring matrices are derived and how they are different. [8+8]
8. How can you predict protein structure using Ramchandran's plot? [16]

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Code No: R05412301 **R05** **Set No. 1**

IV B.Tech I Semester Examinations, November 2010

COMPUTATIONAL MOLECULAR BIOLOGY

Bio-Technology

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. Describe about Jukes - Cantor model for estimation of substitution numbers. [16]
2. What are the different methods used for detecting SNPs and give its applications? [16]
3. Transmembrane proteins are important in drug discovery
   What are their properties and how can we generate their 3-D structures. [16]
4. (a) What are the differences between the initial phases of BLAST and FASTA?
   (b) Briefly describe how the PAM and BLOSUM scoring matrices are derived and how they are different. [8+8]
5. Write short notes on the following :
   (a) Weighted parsimony
   (b) Unweighted Parsimony. [8+8]
6. How can you predict protein structure using Ramchandran's plot? [16]
7. Describe the process of developing spotted arrays? [16]
8. Explain about word or k-tuple methods, used by programs FASTA & BLAST? [16]

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Code No: R05412301 **R05** **Set No. 3**

IV B.Tech I Semester Examinations, November 2010

COMPUTATIONAL MOLECULAR BIOLOGY

Bio-Technology

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. Describe the process of developing spotted arrays? [16]
2. Transmembrane proteins are important in drug discovery
   What are their properties and how can we generate their 3-D structures. [16]
3. Describe about Jukes - Cantor model for estimation of substitution numbers. [16]
4. How can you predict protein structure using Ramchandran's plot? [16]
5. Write short notes on the following :
   (a) Weighted parsimony
   (b) Unweighted Parsimony. [8+8]
6. Explain about word or k-tuple methods, used by programs FASTA & BLAST? [16]
7. What are the different methods used for detecting SNPs and give its applications? [16]
8. (a) What are the differences between the initial phases of BLAST and FASTA?
   (b) Briefly describe how the PAM and BLOSUM scoring matrices are derived and how they are different. [8+8]

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