B.E. Seventh Semester (Biomedical Engineering) (CGS)
10140 : Elective-I : Bio-Informatics : 7 BM 05

P. Pages : 2   AW - 3375
Time : Three Hours   *0252*   Max. Marks : 80

Notes : 1. Answer **Three** question from Section A and **Three** question from Section B.
2. Assume suitable data wherever necessary.
3. Illustrate your answer necessary with the help of neat sketches.
4. Use of pen Blue/Black ink/refill only for writing the answer book.

SECTION - A

1. a) Explain Maxam-Gilbert method of DNA sequencing.   6

   b) Explain the chain termination method for DNA sequencing.   7

OR

2. a) Explain genome information resources.   6

   b) What are the uses of information generated from genome sequence of human?   7

3. a) Which are the different classes of proteins.   7

   b) Explain the Superfamilies of proteins.   7

OR

4. a) Explain.   8
      i)   NRL-3D.   ii)   Protein sequence.

   b) Write about secondary databases.   6

5. a) Explain.   8
      i)   AIDS virus sequence data bank.
      ii) Nucleic acid sequence data bank.

   b) What are sequence data bank.   5

OR

6. a) Explain role of signal peptide data bank.   6

   b) Write a note on AIDS virus sequence data bank.   7

SECTION - B

7. a) What is biological data analysis? Explain it with applications.   7

   b) Write about basics of internet for Bio-informatics.   6

OR

8.	a)	What is biopearl? Write salient features of biopearl.	7
	b)	What is NCBI? Discuss its contribution in computational genomics.	6
9.	a)	Discuss significance of protein primary sequence analysis.	7
	b)	How to search a batch of sequence with FASTA.	7

OR

10.	a)	What is pairwise data searching.	7
	b)	Comment upon BLAST algorithm.	7
11.		What kind of information could be retrieved from small molecules data bases? What are applications of this information in Biomedical engineering?	13

OR

12.	a)	Explain history and working of Gene bank.	7
	b)	Explain.	6
		i) Protein data bank. ii) Enter z.	

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B.Tech. Seventh Semester (Food, Pulp & Paper, Oil & Paint & Petro. Tech.) (CGS)
11064 : Special Tech - IV : Oil & Paint Technology - IV : 7 CT 03

P. Pages : 1

Time : Three Hours

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AW - 3392

Max. Marks : 80

Notes :
1. Answer **three** question from Section A and **three** question from Section B.
2. Due credit will be given to neatness and adequate dimensions.
3. Illustrate your answer necessary with the help of neat sketches.
4. Use of pen Blue/Black ink/refill only for writing the answer book.

SECTION - A

1. Differentiate between soap and detergent. Discuss in detail about mechanism of detergency. 13

OR

2. Describe the manufacture of soap by "Full Boiled" process. Also describe the manufacture of washing soap & toilet soap by give neat flow diagram. 13

3. Classify the detergents by stating examples. Discuss in detail about sulphonation process of Alkyl benzene. 13

OR

4. Give an account of "Semiboiled" process of soap manufacture, compare this process with fullboiled process. 13

5. Give detailed account of utilization of following non - traditional oils in soap manufacture 14
   i) Karanja oil
   ii) Neem oil

OR

6. Write about **any two.** 14
   i) Builders & Fillers in soap manufacture.
   ii) INS factor & Solubility Ratio.
   iii) Shampoo.

SECTION - B

7. Give an account of mechanism of Detergency in detail. Discuss the factor affecting detergency power. 13

OR

8. Describe the manufacture of essential oils by 13
   i) Water distillation &
   ii) Water & steam distillation with the help of neat figure in detail.

9. Describe "Monsavon process" of continuous soap manufacture with neat figure in detail. 13

OR

10. Give an account of production of glycerin by synthetic method with the help of neat flow diagram. 13

11. Describe "Enflurage" and "maceration" method for production of essential oil in detail. 14

OR

12. Give an account of chemical constituents of essential oils with examples in detail. 14

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