

BE Semester: - VIIITH (BIOMEDICAL DEPARTMENT) Question Bank
(BIOINFORMATICS)

All questions carry equal marks (10 marks)

Q.1	Explain in detail: Gene Prediction Methods
Q.2	Write a short note on Protein Prediction methods.
Q.3	Write a short note on: BLAST
Q.4	Explain FASTA along with its steps.
Q.5	Explain Central Dogma of Molecular Biology.
Q.6	Give difference between local and global alignment.
Q.7	Describe atleast 3 types of sequence alignment methods
Q.8	Describe applications of bioinformatics in detail.
Q.9	Explain scope of bioinformatics along with its branches in detail.
Q.10	Explain in detail gene prediction methods.
Q.11	Explain how files can be linked in linux in two different ways with examples.
Q.12	Explain various methods of changing file permissions in linux.
Q.13	What are the wildcards used in linux? Give examples.
Q.14	Explain the following commands with their options and examples: cmp sort touch wc
Q.15	Explain the following: echo \$SHELL more sms mms cd DNA ls -l recession cat sms mms vi fashion rm terrorism ls -x
Q.16	Explain the following: mv file tutorial cp pizza pasta chmod 547 blue chmod g-w protein chmod a+x parties mkdir pastry rmdir dinner grep -i 's' star
Q.17	Explain the following: grep -c '3' virus grep -v '[aeiou]' cv grep -n '^[a-f]' friends grep '[fai][rt]' genetics grep 'hi*' engineering grep 'h.t' biomdical

	grep '[a-z]' biochemistry grep 'ho*.n' discovery
Q.18	What is a variable? What are the types of variables used in Perl? Give one example of each.
Q.19	What is an associative array? Explain with examples.
Q.20	Explain any three functions related to associative array.
Q.21	Describe how to read data from a file.
Q.22	Explain any five operators used in Perl.
Q.23	How splice function can be used to add or delete an element from the array?
Q.24	Compare FASTA & BLAST
Q.25	Write PERL programs to read a file and print the contents of the file in the reverse order.
Q.26	Write PERL programs to print all the odd integers from 1 to 100.
Q.27	Write PERL programs to ask from the user a number and then check whether that number is odd or even.
Q.28	Write PERL programs to obtain DNA sequence from a given mRNA sequence. To obtain reverse complementary strand of any given DNA sequence. To count the no. of elements of an array. To cut the last letter of all the elements of an array.
Q.29	Locally align the following sequences: ACTTGTC CTGT
Q.30	Enlist all the mathematical operators.
Q.31	Explain push, pop, shift and unshift with examples.
Q.32	Explain any five operators used in Perl.
Q.33	Explain any five operators used in Perl.
Q.34	How splice function can be used to add or delete an element from the array?
Q.35	Explain the conditional statements if..elsif..else and unless with examples.
Q.36	Explain foreach loop with an example.
Q.37	Write PERL programs to print any DNA sequence in upper case(which could be in upper or lower case originally)
Q.38	Write PERL programs to read a file and print the contents of the file in the reverse order.
Q.39	Write PERL programs to check if two strings given as arguments are reverse complements of each other.
Q.40	Write PERL programs to Prompt the user to enter two strings of DNA. Concatenate the two strings and print the concatenated string and then the second string lined over its copy at the end of the concatenated strings. For e.g. if the two strings are GGGG and TTTT, print: GGGGTTTT TTTT