

## NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute)

Affiliated to Dr. A.P.J. Abdul Kalam Technical University, Uttar Pradesh, Lucknow

M.TECH

FIRST YEAR (SEMESTER-II) THEORY EXAMINATION (2020-2021)

(Objective Type)

Subject Code: AMTBT0201

Subject: Bioinformatics

Max. Mks. : 40

Time : 70 Minutes

General Instructions:

All questions are compulsory.

Question No- 1 to 5 are objective type question carrying 2 marks each.

Question No- 6 to 20 are also objective type/Glossary based question carrying 2 marks each.

Q.No	Question Content	Question Image	Category	Sub Category	Marks	Options Randomization	Type	Difficulty	Correct	Option1	Option2	Option3	Option4
1	Many scientists are very interested in studying mitochondrial DNA because it		Attempt all the questions	5 X 2=10	2		Single Choice	Brilliant	mutates rapidly and allows us to study evolution over short time scales	is only present in vertebrates closely related to humans	replicates by synthesizing an mRNA that then acts as a DNA polymerase	contains over 50% of the genes in the human genome	mutates rapidly and allows us to study evolution over short time scales
2	Application of bioinformatics include		Attempt all the questions	5 X 2=10	2		Single Choice	Brilliant	all of the above	data storage and management	drug designing	understand relationships between organisms	all of the above
3	In PHYML, The tree searching _____ when the total ML score no longer _____		Attempt all the questions	5 X 2=10	2		Single Choice	Brilliant	stops, increases	ceases, increases	stops, decreases	terminates, decreases	stops, increases
4	Which of the following is incorrect statement about Molecular Markers?		Attempt all the questions	5 X 2=10	2		Single Choice	Brilliant	For studying very closely related organisms, protein sequences are preferred	For studying very closely related organisms, protein sequences are preferred	The decision to use nucleotide or protein sequences depends on the purposes of the study	For constructing molecular phylogenetic trees, one can use either nucleotide or protein sequence data	The decision to use nucleotide or protein sequences depends on the properties of the sequences
5	How many types of deoxynucleoside triphosphates are used in Sanger sequencing?		Attempt all the questions	5 X 2=10	2		Single Choice	Brilliant	4	1	2	3	4
6	ESTs stands for _____ Sequence tags _____		Glossary I	Glossary I	2		Single Choice	Brilliant	expressed	GenBank _____	DNA microarray	expressed	
7	dbEST is a division _____ of that contains sequence data and other information on cDNA sequences		Glossary I	Glossary I	2		Single Choice	Brilliant	GenBank _____	GenBank _____	DNA microarray _____	expressed	
8	_____ technology enables researchers to capture the "snap-shots" of cells on a genome-widescale at the transcriptional level		Glossary I	Glossary I	2		Single Choice	Brilliant	DNA microarray	GenBank _____	DNA microarray	expressed	
9	On average, what is the length of a typical domain _____		Glossary II	Glossary II	2		Single Choice	Brilliant	About 100 residues _____	About 100 residues _____	10- 20 _____	Leucine	
10	What is the length of a motif, in terms of amino acids residue _____		Glossary II	Glossary II	2		Single Choice	Brilliant	10- 20 _____	About 100 residues _____	10- 20 _____	Leucine	
11	Motifs that can form _____ horseshoes conformation are rich with which protein residue _____		Glossary II	Glossary II	2		Single Choice	Brilliant	Leucine	About 100 residues _____	10- 20 _____	Leucine	
12	A single piece of information in a database is called _____		Glossary III	Glossary III	2		Single Choice	Brilliant	Field _____	Field _____	EMBL _____	A collection of software routines	

Q.No	Question Content	Question Image	Category	Sub Category	Marks	Options Randomization	Type	Difficulty	Correct	Option1	Option2	Option3	Option4
13	Which of the following is a nucleotide sequence data base _____		Glossary III	Glossary III	2		Single Choice	Brilliant	EMBL&nbsp;	Field&nbsp;	EMBL&nbsp;	A collection of software routines	
14	Operating system is _____&nbsp;		Glossary III	Glossary III	2		Single Choice	Brilliant	A collection of software routines	Field&nbsp;	EMBL&nbsp;	A collection of software routines	
15	&lsquo;Laboratory work using chemicals, drugs etc using water&rsquo; is referred as _____&nbsp;		Glossary IV	Glossary IV	2		Single Choice	Brilliant	wet lab&nbsp;	wet lab&nbsp;	dry lab&nbsp;	web lab	
16	&lsquo;Laboratory work using computers and computer generated models generally offline&rsquo; is referred as _____&nbsp;		Glossary IV	Glossary IV	2		Single Choice	Brilliant	dry lab&nbsp;	wet lab&nbsp;	dry lab&nbsp;	web lab	
17	&lsquo;Laboratory work using computers and associated web based analysis generally online&rsquo; is referred as _____&nbsp;		Glossary IV	Glossary IV	2		Single Choice	Brilliant	web lab	wet lab&nbsp;	dry lab&nbsp;	web lab	
18	Which of the following act as chain terminator _____		Glossary V	Glossary V	2		Single Choice	Brilliant	Dideoxynucleotides	Dideoxynucleotides	Primer	PROSITE	
19	_____&nbsp;is a chemically synthesized oligonucleotide&nbsp;		Glossary V	Glossary V	2		Single Choice	Brilliant	Primer&nbsp;	Dideoxynucleotides&nbsp;	Primer&nbsp;	PROSITE	
20	Secondary database developed was _____		Glossary V	Glossary V	2		Single Choice	Brilliant	PROSITE	Dideoxynucleotides&nbsp;	Primer&nbsp;	PROSITE	