

PARUL UNIVERSITY
PARUL INSTITUTE OF APPLIED SCIENCES
MID SEMESTER INTERNAL EXAMINATION, APRIL 2017
B. Sc. Semester IV

Subject: Microbiology & Biotechnology

Paper Code: 11102255

Title of the paper: Bioinformatics

Date: 17/04/2017

Time: 12.30 p.m. to 02.00 p.m.

Maximum Marks: 40

Instructions:

- 1. All questions are compulsory and options are given in first and second question only.**
- 2. Numbers to the right of question indicate the marks of respective question.**

Q. 1	Attempt any one question of the following. (i) Describe the database and different biological databases with examples. (ii) Explain the dot matrix with different types of dot plots.	(08)
Q. 2	Attempt any three questions of the following. (i) NCBI and its access to public domain. (ii) GenBank and its different different domains. (iii) EMBL and its different operational sites in European country. (iv) Explain PDB and its significance. (v) Pairwise and multiple sequence alignment	(12)
Q. 3	Do as directed. Attempt all five questions. (i) DDBJ & PIR (ii) What is INDELS? (iii) BLAST (iv) Primary database and its types (v) Similarity and Identity	(05)
Q. 4	Write correct option in your answer sheet for following 15 multiple choice questions.	(15)

MCQ 1	You have two distantly related proteins. Which PAM matrix would you			
	(A)	PAM1	(B)	PAM250
	(C)	PAM60	(D)	PAM120
MCQ 2	ALIGN also known as			
	(A)	Local alignment	(B)	Smith-Waterman algorithm
	(C)	Needleman-Wunsch algorithm	(D)	None
MCQ 3	PAM used for			
	(A)	Orthologous	(B)	Paralogous
	(C)	Homologous	(D)	Analogous
MCQ 4	Pallindromes are			
	(A)	Direct repeats	(B)	Inverted repeats
	(C)	All	(D)	None
MCQ 5	Father of Bioinformatics			

	(A)	Gibbs	(B)	McIntyre
	(C)	Smith	(D)	Dayhoff
MCQ 6	Tbl2asn related to			
	(A)	Genbank	(B)	TAIR
	(C)	PDB	(D)	NCBI
MCQ 7	Global has			
	(A)	Match	(B)	Gap
	(C)	Mis-match	(D)	All
MCQ 8	Hinxton related to			
	(A)	EBI	(B)	NCBI
	(C)	GenBank	(D)	DDBJ
MCQ 9	PAM supports			
	(A)	Induced mutation	(B)	Lethal mutation
	(C)	Natural mutation	(D)	Silent mutation
MCQ 10	BLOSUM has			
	(A)	BLOSUM90	(B)	BLOSUM80
	(C)	BLOSUM60	(D)	All
MCQ 11	BESTFIT for			
	(A)	Local	(B)	Global
	(C)	All	(D)	None
MCQ 12	Inverted diagonal represent			
	(A)	Repeats	(B)	Similar
	(C)	Pallindrome	(D)	Inversion
MCQ 13	GSS stand for			
	(A)	Genetic social Information	(B)	Genetic Sequence Information
	(C)	Genome survey Information	(D)	None
MCQ 14	Self comparison reveals			
	(A)	Diagonal match	(B)	Inverted match
	(C)	Cross-diagonals	(D)	Any one
MCQ 15	Needleman-Wunch algorithm related to			
	(A)	Dynamic Programming	(B)	Global alignment
	(C)	All	(D)	None

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