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GIET UNIVERSITY, GUNUPUR – 765022
M. Sc (Second Semester) Examinations, July – 2023
22BTPC204 – Genomics and Proteomics
(Biotechnology)

Time: 3 hrs

Maximum: 70 Marks

(The figures in the right hand margin indicate marks.)

PART – A**(2 x 10 = 20 Marks)**Q.1. Answer *ALL* questions

	CO #	Blooms Level
a. Draw a labelled diagram of nucleosome structure.	CO1	K3
b. Name the institutes who initiated human genome project.	CO1	K3
c. Define allele.	CO1	K1
d. What is probe?	CO2	K1
e. Differentiate between forward and reverse genetics.	CO2	K3
f. What is restriction mapping?	CO3	K1
g. Explain protein-protein interaction.	CO3	K2
h. Write the applications of gene sequencing.	CO3	K1
i. What is 2D-PAGE?	CO4	K1
j. Define contig.	CO4	K1

PART – B**(10 x 5 = 50 Marks)**Answer ANY FIVE questions

	Marks	CO #	Blooms Level
2. a. Elaborate the genome organization in prokaryotes.	5	CO1	K3
b. Explain the features of extrachromosomal DNA.	5	CO1	K2
3.a. What are molecular markers.	3	CO1	K1
b. Discuss any one restriction mapping techniques with flow diagram.	7	CO1	K2
4. a. Define karyotyping.	2	CO2	K1
b. Explain the method of karyotype to diagnose genetic disorders?	8	CO2	K2
5.a. Discuss the genome sequencing methods used for microbes.	5	CO2	K2
b. Explain in detail about DNA fingerprinting method.	5	CO2	K2
6. a. Write note on automated sequencing method.	5	CO3	K1
b. Discuss about forward and reverse genetics.	5	CO3	K2
7.a. Write a note on proteome database.	5	CO3	K1
b. Discuss the application of 16s rRNA typing/sequencing.	5	CO4	K2
8. a. Write notes on metagenomics.	5	CO4	K1
b. Discuss the features of system biology.	5	CO4	K2

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