



**GANDHI INSTITUTE OF ENGINEERING AND TECHNOLOGY, ODISHA, GUNUPUR
(GIET UNIVERSITY)**

M. Sc. (First Semester - Regular) Examinations, February - 2025

24MLSPC11002 – Cell Biology and Genetics

(Life Science)

Time: 3 hrs

Maximum: 60 Marks

Answer ALL questions

(The figures in the right hand margin indicate marks)

PART – A

(2 x 5 = 10 Marks)

Q.1. Answer **ALL** the questions

	CO #	Blooms Level
a. Differentiate between prokaryotes and eukaryotes.	CO1	K2
b. Draw a neat structure of chromosome and classify them based on centromere located on it.	CO2	K3
c. What is the function of lysosome.	CO3	K3
d. Define chromosomal mapping.	CO4	K2
e. Explain gene interaction.	CO5	K4

PART – B

(10 x 5 = 50 Marks)

Answer **ALL** the questions

	Marks	CO #	Blooms Level
2.a. Write a note on mitochondrial DNA.	5	CO3	K3
b. Write a note on ribosome.	5	CO3	K4
(OR)			
c. Write a note on cell signalling.	5	CO2	K3
d. Explain about receptors? Describe the role of receptor with a suitable pathway.	5	CO2	K4
3.a. Write a note on Nuclear Pore Complex (NPC).	5	CO2	K4
b. Write a note on cytoskeleton.	5	CO1	K3
(OR)			
c. Write a note on structural and numerical changes in chromosome.	10	CO4	K4
4.a. Describe about chromosomal packaging.	5	CO2	K2
b. Discuss about GPCR signalling	5	CO2	K3
(OR)			
c. Discuss molecular events of mitosis.	5	CO2	K2
d. Discuss about cell cycle. Mention role of regulators and check points in cell cycle.	5	CO2	K3
5.a. Discuss about plasma membrane.	5	CO1	K3
b. Describe the structure and function of ER.	5	CO3	K2
(OR)			
c. Discuss about cell wall of eubacteria.	5	CO1	K3
d. Describe the structure and function of Golgi body.	5	CO3	K2
6.a. Write a note on linkage.	5	CO4	K2
b. Write an account CAMs.	5	CO1	K3
(OR)			
c. Write a note on linkage.	5	CO4	K2
d. Write an account cell adhesion molecule.	5	CO1	K3

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