QP Code: D 112769	**Total Pages:1**	**Name:**
		Register No.

FIRST SEMESTER UG DEGREE EXAMINATION, NOVEMBER 2024

(CUFYUGP)

ZOO1MN102 Basics in Cellular Physiology

2024 Admission onwards

Maximum Time: 2 Hours	**Maximum Marks: 70**

Section A

All Questions can be answered. Each Question carries 3 marks (Ceiling : 24 Marks)

1	Sketch and label a typical animal cell.
2	"Why are mitochondria referred to as the powerhouse of the cell?"
3	What is synapse and crossing over?
4	What roles do DNA polymerase and primase play in DNA replication?
5	Define the term “gene.”
6	What is a dihybrid cross?
7	Briefly explain epistasis.
8	What are silent mutations?
9	What is the main cause of galactosemia?
10	What are primary causes and characteristics of Down syndrome?

Section B

All Questions can be answered. Each Question carries 6 marks (Ceiling : 36 Marks)

11	Briefly describe the structure of plasma membrane.
12	Explain the process of DNA replication, highlighting the role of leading and lagging strands.
13	Discuss the classification of chromosomes based on their morphology.
14	What is pleiotropy? Provide an example.
15	Briefly describe disorders due to autosomal anomalies.
16	State Mendel’s laws of Inheritance?
17	Describe the Watson and Crick model of DNA.
18	Discuss the genetic basis of Klinefelter and Turner syndrome.

Section C

Answer any ONE. Each Question carries 10 marks (1x10=10 Marks)

19	Explain the stages of the cell cycle and outline the importance of checkpoints.
20	Write a detailed account on non-mendelian inheritance pattern.