QP CODE: D1BZL2403

Name: .....
Reg.No.: .....

FIRST SEMESTER FYUGP EXAMINATION NOVEMBER 2024

MINOR

ZOO1MN102 BASICS IN CELLULAR PHYSIOLOGY

Time : 2 Hrs **Maximum Marks : 70**

BL - Bloom's Taxonomy Level (1 to 6) CO - Course Outcome

Section A

Ceiling Marks : 24

Answer all questions. Each carries 3 marks.

No.	Question	M	BL	CO
1.	Describe the function of the plasma membrane in maintaining cell structure.	3	2	CO1
2.	What are introns and exons?	3	1	CO2
3.	Explain the function of DNA polymerase in replication.	3	2	CO2
4.	How would you use a karyotype to identify chromosomal abnormalities?	3	3	CO2 CO4
5.	Create a karyotype of an individual having trisomy 13.	3	6	CO2 CO4
6.	What does a test cross involve?	3	1	CO3
7.	Describe how pleiotropy can lead to multiple symptoms in a genetic disorder.	3	2	CO3 CO4 CO6
8.	Apply the concept of co-dominance to explain the inheritance of ABO blood types.	3	3	CO3 CO6
9.	Explain the implications of Turner's syndrome on female development and fertility.	3	2	CO4
10.	What is mosaic trisomy?	3	1	CO4

Section B

Ceiling Marks : 36

Answer all questions. Each question carries 6 marks.

No.	Question	M	BL	CO
11.	Discuss the significance of genetic recombination during meiosis.	6	2	CO2
12.	Assess the role of checkpoints in the cell cycle and their impact on cell health.	6	5	CO2
13.	Analyze the consequences of a malfunction in DNA helicase during replication.	6	4	CO2
14.	Examine the process of crossing over and its effects on genetic variation.	6	4	CO2
15.	Compare the inheritance patterns of traits governed by incomplete dominance, co-dominance and complete dominance.	6	4	CO3 CO6
16.	Explain the various classifications of mutations.	6	2	CO4
17.	Design an educational poster that illustrates the effects of specific gene mutations, including albinism and galactosemia.	6	6	CO4
18.	Examine the psychological and social implications of living with Klinefelter's syndrome.	6	4	CO4

Section C

Answer any 1 question. Each carries 10 marks. (1x10=10 marks)

No.	Question	M	BL	CO
19.	Discuss the structural features and functional roles of the endoplasmic reticulum, golgi bodies, lysosomes and cytoskeleton in eukaryotic cells.	10	2	CO1
20.	Assess the significance of Mendel's contributions to the field of genetics and how they have shaped our understanding of heredity.	10	5	CO3

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