QP CODE: 22103444

22103444

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS, NOVEMBER 2022

Fifth Semester

CORE COURSE - ZY5CRT06 - CELL BIOLOGY & GENETICS

Common for B.Sc Zoology Model I, B.Sc Zoology Model II Aquaculture, B.Sc Zoology Model II Food Microbiology, B.Sc Zoology Model II Medical Microbiology, B.Sc Biological Techniques and Specimen Preparation Model III & B.Sc Zoology and Industrial Microbiology Model III Double Main

2017 Admission Onwards

F4CA6FB9

Time: 3 Hours

Max. Marks : 60

Part A

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. What is capsid?
2. Define symport.
3. Who discovered lysosomes.
4. What are telomeres?
5. What is cell division?
6. What is a hypostatic gene?
7. What is multiple factor inheritance? Give an example.
8. Write the dihybrid test cross ratio in complete linkage.
9. Mention an example of X linked recessive trait.
10. What are mutagens? Give an example.
11. Define Nullisomy.
12. Name the enzyme that is absent in albinos.

(10×1=10)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Write short note on the origin of endoplasmic reticulum.
14. Briefly explain the structure of nuclear pore complex with the help of a diagram.
15. Write a short note on different types of intercellular signaling.
16. On the basis of chromosome theory of inheritance explain the parallel behaviour of gene and chromosome.
17. Explain the genetic basis of erythroblastosis foetalis.
18. Explain Lyon's hypothesis and dosage compensation.
19. Distinguish between Y-linked genes and XY-linked genes with suitable examples.
20. Describe the molecular basis of gene mutation.
21. Explain sickle cell anemia.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **10** marks.*

22. Give an acount on the various models of plasma membrane.
23. Write an essay on the various allelic interactions with suitable examples.
24. Give an account on the chromosomal basis of sex determination.
25. Discuss in detail the genetics and clinical manifestations of autosomal chromosome and sex chromosomal abnormalities.

(2×10=20)