21101636

QP CODE: 21101636

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) SPECIAL SUPPLEMENTARY EXAMINATION, JULY 2021

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

2018 Admission Only

D410DB0B

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

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

1. Who proposed cell theory?
2. Who proposed sandwitch model?
3. Name four endoplasmic reticulum chaperone proteins.
4. Name the site of aerobic respiration in eukaryotic cells.
5. In which meiotic phase the genetic crossing over occurs?
6. What is co-dominance?
7. Why polygenic inheritance is known as quantitative inheritance?
8. Who proposed Genic Balance theory of Sex determination?
9. Why a chromosome map is also called as a cross over map?
10. What are induced mutations?
11. What are base pair substitutions?
12. How many pairs of autosomes are there in humans?

(10×1=10)

Part B

*Answer any **six** questions.*

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

13. Give the structure and function of nucleolus.
14. Write a short note on Lampbrush chromosomes.
15. Describe the different type of signalling molecules.
16. List out the difference between test cross and back Cross giving examples.
17. Explain the genetic basis of erythroblastosis foetalis.
18. What are Barr bodies? Why are they called so?
19. What are the characteristics of sex linked inheritance? Explain Y-Linked inheritance with an example.
20. Explain Sickle Cell anaemia.
21. Discuss the genetics and symptoms of alkaptonuria and phenylketonuria.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Describe in detail the passive and active transport mechanisms in the cell.
23. Write an essay on the various Non-allelic interactions with suitable examples.
24. Define Linkage. Describe the types of linkages with examples.
25. Discuss in detail the genetics and clinical manifestations of autosomal chromosome and sex chromosomal abnormalities.

(2×10=20)