QP CODE: 24031592

24031592

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS, OCTOBER 2024

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

52DA5F5F

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

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

1. What is nucleoid?
2. Who proposed unit membrane model?
3. What is a residual body?
4. Give any one function of nucleolus.
5. What are the salient features of diplonema?
6. State Mendelian Law of Independent assortment.
7. Give two examples of non allelic interactions.
8. How many Barr bodies are there in a normal human male cell ?
9. Mention an example of X linked recessive trait.
10. Differentiate between paracentric and pericentric inversions.
11. What is alkaptoneuria?
12. Define eugenics.

(10×1=10)

Part B

*Answer any **six** questions.*

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

13. Discuss the role of ribosomes in protein synthesis.

14. Write a short note on Lampbrush chromosomes.

15. Write a short note on different types of intercellular signalling.

16. Describe recessive lethal genes with a suitable example.

17. Explain polygenic inheritance with reference to skin colour in man.

18. Explain female heterogamety . Give examples.

19. Distinguish between Y-linked genes and XY-linked genes with suitable examples.

20. Mention the different types of translocations.

21. Explain Sickle Cell anemia.

(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. What are multiple alleles? Illustrate by giving an example.

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)