QP CODE: 22100087

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Reg No : .....

Name : .....

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

D263A5E3

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

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

1. Who discovered cell?
2. Distinguish between exocytosis and endocytosis.
3. State the types of RNAs found in the 80S ribosome.
4. Who was the scientist who first described nucleus?
5. What are cytokines?
6. Define homozygous .
7. Define factor hypothesis.
8. How many Linkage Groups are there in man?
9. How is variation brought about in organisms?
10. What is Non-disjunction?
11. What is the karyotype of Turner Syndrome?
12. Explain Brachydactyly

(10×1=10)

Part B

*Answer any **six** questions.*

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

13. Write a note on endosymbiont hypothesis by suggesting homologies between the mitochondria and the bacterial cells.

14. DNA is packaged into chromosomes. Explain the statement.

15. Draw a neat labelled diagram of the first mitotic division and cytokinesis.

16. What are Non-allelic interactions? Explain with suitable example.

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

18. Distinguish male heterogamy from female heterogamy, giving examples.

19. Describe the environmental mechanism of sex determination.

20. Describe the numerical mutation of chromosome.

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. Give an acount on the various models of plasma membrane.

23. Explain the inheritance of ABO blood group in man.

24. Explain sex linked inheritance with hemophilia as an example.

25. Describe in detail the different types of chromosomal aberrations.

(2×10=20)