15U517 (Pages:2) Name: ……..

Reg. No…….

FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, OCTOBER 2017

(CUCBCSS-UG)

CC15U ZO5 B08 -CELL BIOLOGY AND GENETICS

(Zoology - Core Course)

(2015-Admission Regular)

Time: Three Hours Maximum: 80 Marks

A. Answer ***all*** questions. Each question carries 1 mark:

1. Haemophilia is an example for _____ inheritance.
2. Cancer causing genes are called _____.
3. Segregation of genes occur at the time of _____.
4. Delivery of DNA into a patient's cell as a drug to treat disease _____
5. An organism that contains both male and female secondary sexual characteristics _____
6. The phenomenon where the effect of one gene is dependent on the presence of a modifier gene_____
7. _____ is an example for extrachromosal inheritance in humans.
8. _____ is a type of programmed cell death
9. A complex of an mRNA and two or more ribosomes attached to it for translation _____
10. Give two examples for autosomal anomalies in man.

(10 x1 = 10 marks)

B. Answer any ***ten*** questions. Each question carries 2 marks**:**

11. What is metastasis?
12. Write a brief note on G_0 phase in cell cycle.
13. What is pleiotropism?
14. What is linkage and recombination?
15. What are sex influenced traits?
16. Give the significance of Barr body.
17. Write the importance of eugenics.
18. What are features of Klinefelter's syndrome?
19. What is GERL concept?
20. Differentiate between 70S and 80S ribosome.

21. Give the principle behind electron microscopy.
22. What is active transport?

(10 x 2 = 20 marks)

C. Answer any ***five*** questions. Each question carries 6 marks:

23. Give the characteristics of cancer cells and also the various types of cancer.
24. Draw a neat and labelled diagram of the nuclear pore complex and its function.
25. Explain the chromosomal mechanism of sex determination.
26. Describe polytene chromsomes.
27. Explain polymorphism in lysosomes.
28. Give an account of staining in histology.
29. Write a note on Incomplete dominance and Co-dominance with suitable examples.
30. Elaborate on Pedigree analysis in man.

(5 x 6 = 30 marks)

D. Answer any ***two*** questions. Each question carries 10 marks**.**

31. Describe Meiosis 1 with diagrams.
32. Write an essay on chromosomal mutations.
33. Explain the Fluid mosaic model of Plasma membrane and add a note on the various modifications of plasma membrane.
34. Define Multiple Alleles. Explain with reference to ABO blood grouping in man. Write a short note on MN and Bombay phenotype.

(2 x 10 = 20 marks)