TM142060A   Reg. No…………………………..
                                                   Name …………………………….

M.Sc. DEGREE (CSS) EXAMINATION, APRIL 2015
SECOND SEMESTER-CORE COURSE (BOTONY)
BOT2GB – GENETICS AND BIOCHEMISTRY

Time : Three Hours   **Maximum Weight:30**

I. Answer any _SIX_ of the following in not less than 50 words (Weight 1 each)

1. Mendel's Law of segregation is also known as Law of purity of gametes, Explain.

2. Write a note on the pathways for nucleotide biosynthesis

3. Explain polygenic inheritance citing an example? Add a note on QTL

4. What are proto oncogenes?

5. State Hardy-Weinberg law. Give any two applications

6. Write a short note on triglycerides?

7. What are anomers? Give example.

8. DefineZwitter ions citing example?

II. Answer any _SEVEN_ of the following in not less than 100 words (Weight 2 each)

9. Briefly explain tetrad analysis in Neurospora

10. What are tumor suppressor genes? Explain the role of p^{53} in the development of cancer.

11. Explain the different factors which affect allelic frequency of a population.

12. What are buffers? Explain buffer action with the help of example.

13. What are glycoproteins? How are they classified?

14. Explain the different steps of   -oxidation.

15. Explain the Edman's degradation method of protein sequencing

16. Write a short note on Lineweaver Burk plot. Give its applications

17. What are coenzymes? Draw the diagram of any two vitamin derived coenzyme

18. Write a short note on terpenes and its classification.

III. Answer any _TWO_ of the following in not less than 250 words (Weight 5 each)

19. Define linkage and crossing over. Give experimental evidences for supporting the exchange of chromosomal segments during crossing over.

20. Explain the different levels of organization of proteins.

21. Explain the various mechanisms of regulation of enzymes by citing examples.