

Reg. No..... Name.....

M. Sc. DEGREE END SEMESTER EXAMINATION APRIL 2017

SEMESTER - 2: BOTANY

COURSE: 15P2BOTT08, GENETICS AND BIOCHEMISTRY

(For Supplementary - 2015 Admission)

Time: Three Hours

Max. Marks: 75

PART - A

Answer **any eight** questions briefly; each question carries 2 marks

1. What are the structural roles of carbohydrates?
2. Define linkage and crossing over.
3. What are epimers? Give example.
4. Write a short note on holandric genes?
5. What are terpenoids? Mention its significance.
6. What are the components of starch? How do they differ in their structure?
7. Differentiate between penetrance and expressivity?
8. What is recombinant frequency?
9. Differentiate between cofactors and coenzymes.
10. What is mitochondrial inheritance?
11. Describe glycosidic bond.
12. What are proto-oncogenes? (2 x 8 = 16)

PART - B

Answer **any seven** questions; each question carries 5 marks

13. What are quantitative traits? Add a note on QTL.
14. Write a note on proteoglycan.
15. What is competitive enzyme inhibition? Explain with an example.
16. Briefly explain the Edman method of protein sequencing.
17. Explain pKa value.
18. Briefly explain mapping in bacteria.
19. Explain Interference and co-efficient of coincidence.
20. Write a note on p53.
21. Explain the structure and function of NAD⁺.
22. What are the characteristics of autosomal dominant inheritance? (7 x 5 = 35)

PART - C

III. Answer **any two** questions; each question carries 12 marks.

23. What are lipids? Give the structure and classification of lipids.

OR

24. Explain the different levels of organisation of proteins.

25. What is Hardy -Weinberg law? Explain the factors that alter allelic frequencies.

OR

26. Describe the experiment of Creighton and McClintock that demonstrated that recombination involved a physical exchange of chromosomal material?

(12 x 2 = 24)
