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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT  
TEST-1 EXAMINATION- FEBRUARY - 2019

B.Tech 8th, Semester

COURSE CODE: 1411 WBT531

MAX. MARKS: 15

COURSE NAME: Plant Biotechnology

COURSE CREDITS: 03

MAX. TIME: 1 HR

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*Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

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Q.1 Attempt any four of following

CO I 1x4=4 (15minutes)

- a. Why Agrobacterium infects through wounded plant cells?
- b. Draw a well labeled diagram of Ti plasmid?
- c. What is the function of Vir A and Vir E operon genes in T-DNA transfer?
- d. Selection pressure in term of concentration of selective agent should, be determined under the actual transformation conditions. Justify the statement
- e. Why chemically-regulated promoters should be derived from organisms distant in evolution to the organisms

Q.2

CO I, CO II (20-25 minutes)

- I. Describe the infection cycle of cauliflower mosaic virus? Mention two discrete reason which make us believe that 35S promoter should be strong promoter. 4
- II. Discuss the growth of commercialization of GM crops at world level scenario, highlighting the area of adoption countries and traits involved. Mention two discrete points arguing that debate over GM crops is over or receding. 2

Q.3

CO I 5 (15minutes)

Write a short note on streptomycin and spectinomycin resistance genes or phosphinothricin acetyl transferase as marker genes highlighting sources of gene, mode of action of selection agent and enzyme encoded. Mention any two examples of reporter genes in which qualitative assay can be non invasive.