JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- 2025

M.Tech. - Ist Semester (BT)

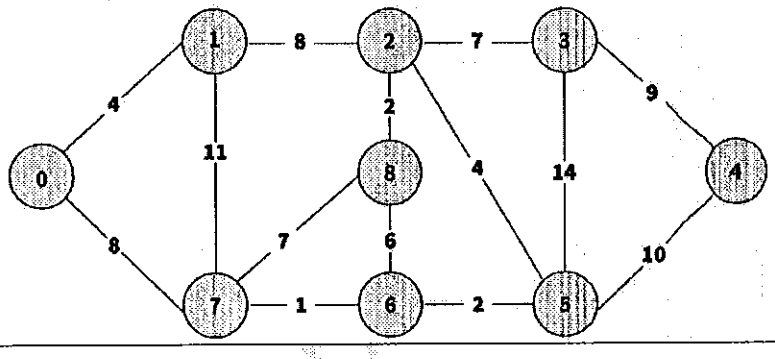
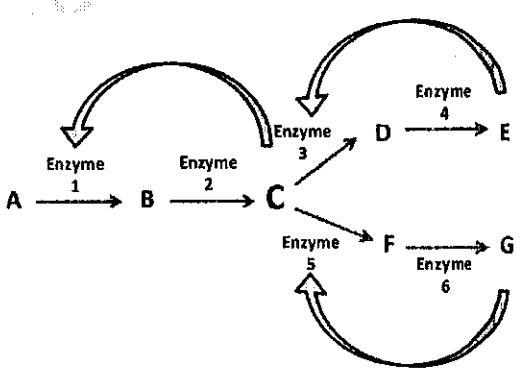
COURSE CODE (CREDITS): 18M1WBT133 (3) MAX. MARKS: 25

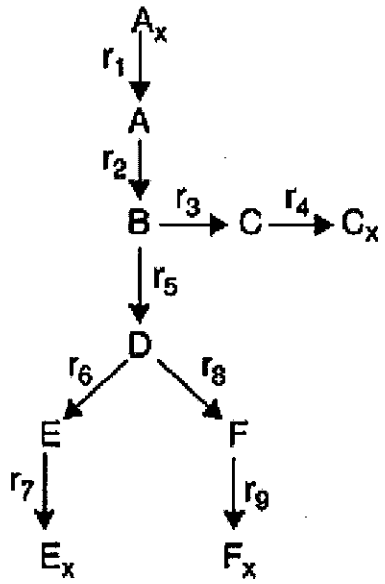
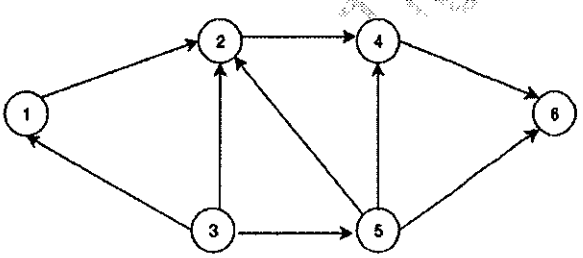
COURSE NAME: Advances in Computational System Biology

COURSE INSTRUCTORS: Dr. Raj Kumar MAX. TIME: 1 Hour 30 Min

Note: *(a) All questions are compulsory.*

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

Q.No	Question	Marks
Q1.	Calculate the minimum spanning tree for the following graph using Kruskal's Algorithm. 	5
Q2	Represent the given pathway using SBGN. 	5
Q2	Create a stoichiometric matrix for the following network and its stoichiometric analysis:	5

		
Q4	Calculate the adjacency matrix for the given graph: 	2
Q5	Short notes: a) Order of a Network b) Euler circuit c) Hamiltonian path d) Network Vs. Tree	2 × 4 = 8