

BI0534

### **Examples of Previous Exam Questions**

#### Study Guide

- x. What is a model?
- x. What is the ecological interpretation of the dominant eigenvalue of the Leslie matrix?
- x. What are the three properties of models that Levins (1966) suggested could not be simultaneously maximized?
- x. Identify the key assumptions of the Logistic growth model.
- x. What is meant by donor-determined flow? Recipient controlled?
- x. What is a state variable?
- x. Sketch the relationships between XX and YY. (I often ask for sketches on this kind of exam; review the diagrams in class notes).
- x. Write the formula for XX and identify the variables and parameters.
- x. Draw the diagram from the following adjacency matrix <<OR>> construct the adjacency matrix from the following directed graph.
- x. Sketch the expected dynamics of the following model. Make sure to correctly label the axes and identify key points of interest.
- x. What is the steady-state solution of the example kinematic graph?
- x. Identify one or more important insights provided by model XX.
- x. Find the maximum and minimum values for function XX.
- x. Find the Equilibrium values of model XX.
- x. What an essay describing the variety of ways models can be used in science.
- x. Describe the type of model presented in the paper you read. Make sure to state clearly why this model type is the best description.