United International University

School of Science and Engineering

Class Test 5; Year 2021; Semester: Summer

Course: BIO 3105; Title: Biology for Engineers, Section: A

Upload instruction: RENAME pdf file as “Bio3105_A_ID”

1 Give the equations for chemosynthesis and photosynthesis. Which one of these two do you think vital for ecosystems on earth? Give reasons in brief. 6

2 Do you think pandemic can potentially spread out from the ecosystem? Give reasons from the concept of ecosystem dynamics. 6

3 Go to the simulator and solve the followings. Link: https://www.learner.org/wp-content/interactive/envsci/ecology/ecology.html 8

(a) Run the simulator including the components according to your class serial.
(b) Attach the results showing date and time from the simulator.
(c) Discuss the results point by point.
(d) Mention the population number after 30 days.

Serial 1-10: Plant A, Plant B, Herbivore B (eats Plant A and B), Omnivore B (eats Plant B and Herbivore B), and Top Predator (eats Herbivore B and Omnivore B).

Serial 11-20: Plant C, Plant B, Herbivore A (eats Plant C), Omnivore B (eats Plant B and Herbivore A), and Top Predator (eats Omnivore B).

Serial 21-30: Plant A, Plant C, Herbivore A (eats Plant A), Omnivore A (eats Herbivore A), and Top Predator (eats Omnivore A).

Serial 31-40: Plant A, Plant B, Herbivore C (eats Plant A and B), Omnivore A (eats Plant B and Herbivore C), and Top Predator (eats Omnivore A).

Serial 41-50: Plant A, Plant B, Plant C, Herbivore A (eats Plant A and B), Omnivore B (eats Plant C and Herbivore A), and Top Predator (eats Herbivore A and Omnivore B).

Serial 51-60: Plant A, Plant C, Herbivore B (eats Plant A), Omnivore B (eats Plant C and Herbivore B), and Top Predator (eats Herbivore B and Omnivore B).