Unit B Chapter 3 HW Review Question Answers

Section 3.1

1. The three stages: growth, stability, and decline
2. Charts should be labeled and titled to show each of the four factors: population size, density, spacing and age structure.
3. A shift in age distribution to individuals that are reproductive age will likely increase the population
4. Answers should demonstrate an understanding of the concept of population spacing
5. Population size is the number of individuals in a population at a given time. Density measures the number of individuals that occupy a certain area.
6. A heavy thunderstorm may fell trees, destroying birds’ habitat, resulting in decreased reproduction

Section 3.2

1. Scientists look at birth, death, immigration, and emigration
2. Density-dependent: disease and competition; density-independent: temperature changes, natural events
3. Opportunists produce large numbers of offspring and reproduce rapidly if they fall below carrying capacity. They have a wide range. Competitors remain at or near carrying capacity. They produce fewer offspring and take longer to develop. A greater number of competitors reach reproductive age.
4. A habitat can only support a limited number; populations may immigrate or emigrate.
5. Many possible answers
6. Loss of habitat and polluted water; density-independent

Section 3.3

1. Scientists must also consider the age structure of a population and whether factors such as disease affect health and age expectancy
2. Humans have shaped their environment – mostly through technology and habitat expansion
3. Introduction of new species, overfishing and pollution, contribute to the decline and extinction of other species.
4. If people are dying at a younger age, many may not survive to reproduce. The population will most likely decline.
5. Possibly… the maximum population can be calculated by comparing the land mass with the number of people it can support
6. Answers will vary