***Natural Disasters, 11e* (Abbott)**

**Chapter 1 Natural Disasters and the Human Population**

1) As the global human population increases, the death toll from natural disasters is expected to \_\_\_\_\_\_\_\_.

A) decrease

B) increase

C) stay about equal to the death total in 2014

D) stay about equal to the death total in 2000

E) decrease to nearly zero

2) Based on data for the period from 1970 to 2017, \_\_\_\_\_\_\_\_ experienced the greatest loss of life from natural disasters.

A) North America

B) South America

C) Europe

D) Asia

E) Africa

3) The greatest insurance dollar losses related to natural disasters between 1970 and 2017 occurred in \_\_\_\_\_\_\_\_.

A) Mexico

B) China

C) the United States

D) Pakistan

E) India

4) Based on insurance industry records of economic loss from natural disasters, 32 of the 40 most expensive disasters between 1970 and 2017 were \_\_\_\_\_\_\_\_.

A) weather events

B) volcanic eruptions

C) earthquakes

D) landslides

E) fires

5) The return period of a disaster is the average number of years \_\_\_\_\_\_\_\_.

A) before survivors return to their homes

B) before the economy returns to pre-disaster levels

C) required to exponentially decay to zero

D) between same-sized events

E) between events of the same type, regardless of size

6) Which of the following disasters has the highest probability of causing a "10-fatality event" each year?

A) an earthquake

B) a volcanic eruption

C) a hurricane

D) a tornado

E) a flood

7) Which of the following disasters has the highest probability of causing a "1,000-fatality event" each year?

A) an earthquake

B) a volcanic eruption

C) a flood

D) a tornado

E) a hurricane

8) The rapid increase in human population during the past several centuries is an example of \_\_\_\_\_\_\_\_ growth.

A) linear

B) algebraic

C) parabolic

D) logarithmic

E) exponential

9) Using the rule of 70, money invested at 5% annual interest will double in \_\_\_\_\_\_\_\_ years.

A) 70

B) 65

C) 14

D) 5

E) 35

10) Using the rule of 70, a population growth rate of 7% annually will result in doubling a population in \_\_\_\_\_\_\_\_ years.

A) 70

B) 35

C) 10

D) 7

E) 2

11) The \_\_\_\_\_\_\_\_ century saw many of the intellectual advances that set the stage for the present phase of cultural change, with the causes of many diseases being recognized, and the principles of public health being established.

A) eighteenth

B) sixteenth

C) fifteenth

D) seventeenth

E) fourteenth

12) In the last two or three centuries birthrates \_\_\_\_\_\_\_\_.

A) have changed little, while death rates have plunged

B) and death rates have plunged

C) and death rates have skyrocketed

D) have skyrocketed, while death rates have plunged

E) and death rates remained flat

13) In 2017 the human population of the world was about \_\_\_\_\_\_\_\_.

A) 550 million

B) 7.5 billion

C) 4.6 billion

D) 14.8 billion

E) 945 million

14) The growth rate of the world population equals \_\_\_\_\_\_\_\_.

A) the birthrate plus the death rate

B) the birthrate minus the death rate

C) the death rate minus the birthrate

D) None of these choices are correct.

15) At present, the worldwide population of humans is growing at a rate of \_\_\_\_\_\_\_\_% per year.

A) 0.02

B) 0.12

C) 1.2

D) 12

E) 22

16) At present, after subtracting deaths from births, world population increases 1.2 percent per year for a doubling time of \_\_\_\_\_\_\_\_.

A) 58 years

B) 14 years

C) 140 years

D) 70 years

E) 280 years

17) At present, the world population of humans grows by about \_\_\_\_\_\_\_\_ million per year.

A) 0.08

B) 0.8

C) 8

D) 80

E) 800

18) The growth of human population worldwide over the past 1,000 years has been \_\_\_\_\_\_\_\_.

A) essentially zero

B) exponential, with a constant growth rate

C) exponential, with a generally increasing growth rate

D) on a straight linear increase with time

E) logarithmic

19) In the last 50 years of the 20th century, world population grew from \_\_\_\_\_\_\_\_ billion to over 6 billion.

A) 5

B) 4

C) 3.5

D) 3

E) 2.5

20) Most of the more-developed countries have \_\_\_\_\_\_\_\_.

A) low death rates and low birthrates

B) low death rates and high birthrates

C) high death rates and low birthrates

D) high death rates and high birthrates

21) Today, the less-developed countries have \_\_\_\_\_\_\_\_.

A) low death rates and high birthrates

B) low death rates and low birthrates

C) high death rates and low birthrates

D) high death rates and high birthrates

22) What caused the collapse of the human population on Easter Island from its peak in 1550 CE?

A) Human activities overwhelmed the environment.

B) Dutch sailors introduced a foreign virus in 1722.

C) The society went through a demographic transition.

D) A series of tsunami hit the island in 1551 CE.

E) A volcanic eruption buried the island in ash in 1588 CE.

23) The introduction of the potato in Ireland in the 1500's \_\_\_\_\_\_\_\_.

A) decreased the carrying capacity of the island

B) increased the carrying capacity of the island

C) paused the demographic transition

D) reversed the demographic transition

E) decreased the birthrate

24) During prosperous times, the Easter Islanders' diet was based on \_\_\_\_\_\_\_\_.

A) chickens and yams

B) potatoes and goats

C) fish and turtles

D) nuts, figs, and corn

E) nuts, fish, and bananas

25) The population of Easter Island was limited by all but which of the following?

A) war between rival clans

B) environmental degradation from the use of resources required to move statues

C) cannibalism

D) lack of trees to build canoes to catch more fish

E) the Ebola virus

26) After initial settlement about 1,500 years ago, the population of Easter Island \_\_\_\_\_\_\_\_ in 1722.

A) grew steadily from initial settlement until the Dutch arrived

B) had decreased to nearly zero by the time the Dutch visited the Island

C) reached a peak and then declined before the Dutch arrived

D) all died from a smallpox epidemic brought by the Dutch

27) Before the time of initial settlement by Polynesians, Easter Island had all but which of the following?

A) high temperatures and humidity

B) no permanent streams

C) poorly drained and marginal soils

D) about 30 native plant species

E) several species of native terrestrial mammals

28) About 1550 CE, the human population of Easter Island was about 7,000; when the first European contact came from the crew of a Dutch ship on Easter Sunday, 5 April 1722, the population of Easter Island \_\_\_\_\_\_\_\_.

A) was about the same as it was in 1550

B) had dropped to zero

C) had ballooned to nearly 50,000

D) had dropped to about 2,000

E) had become cannibalistic and ate the Dutch sailors

29) Most of the 40 deadliest disasters between 1970 and 2013 occurred in a belt running from China and Bangladesh through India and Iran to Turkey. This area was particularly vulnerable because \_\_\_\_\_\_\_\_.

A) it has a high population density

B) most of the world's earthquakes and volcanic eruptions occur here

C) precipitation rates are very high in this region, producing frequent, large, and sudden floods

D) lightning producing thunderstorms are more common in these regions

E) fires are more common in these regions

30) In a demographic transition, a population goes from \_\_\_\_\_\_\_\_.

A) using one form of government to another

B) a low birthrate to a high birthrate

C) high death rates and low birthrates to low death rates and high birthrates

D) low death rates and high birthrates to high death rates and low birthrates

E) a low death rate to a high death rate

31) When a disease infects and/or kills people all over the world, the event is referred as a \_\_\_\_\_\_\_\_.

A) pandemic

B) virus

C) capacity correction

D) mutation

E) natural hazard

32) In 2013, the 40 deadliest natural disasters together killed over 17,000 people.

33) In general, there is an inverse correlation between the frequency and the magnitude of a disaster process.

34) If a particular disaster has a high frequency of occurrence, it also has a large return period (recurrence interval).

35) In general, the larger and more energetic the disaster event, the shorter the return period between such events.

36) The annual likelihood of a tornado that kills 10 people is less than that of an earthquake killing the same number of people.

37) The likelihood over 20 years of a hurricane that kills 1,000 people is greater than that of an earthquake that kills 1,000 people.

38) Of the 40 worst disasters between 1970 and 2013, the most frequent mega-killers were hurricanes and earthquakes.

39) In the period between 1970 and 2017, 28 of the 40 worst disasters occurred in a belt running from Bangladesh through India and Iran to Turkey.

40) Wealthy countries tend to have low or negative rates of population growth.

41) The locations of the worst dollar-loss disasters for the insurance industry present a very different picture than the list of worst locations for fatalities in the last four decades.

42) Today, the world growth rate for human population is about 1.2%.

43) By the year 2000 BCE, the world's total population was over 1 billion.

44) Using the rule of 70, a population growth rate of 2% annually will result in doubling a population in 35 years.

45) At present, the world population is growing at about 8.5 percent per year for a doubling time of 20 years.

46) Each year the world's population grows by an amount equal to the population of Germany.

47) The decrease in the worldwide fertility rate is likely linked to urbanization and increased opportunities for women.

48) When the carrying capacity drastically decreases, populations collapse.

49) Nations with stronger democracies tend to have lower death totals from natural disasters.

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51) A virus requires a host in order to reproduce.

52) The difference between a world population in the year 2150 of 3.6 billion or 27 billion rests on a difference of only 1 child per woman.

53) A very slow exponential growth rate of population can continue indefinitely on an Earth of finite size and resources.

54) Beginning in the eighteenth century, discoveries in science, medicine, and public health caused death rates to drop dramatically.

55) The human population growth presently varies greatly from one region to another.

56) During a demographic transition, the death rate drops while the birthrate remains high.

57) The age distribution of a population (relative proportions of people of different ages) is not important when considering the growth rate of that population.

58) In the last 50 years of the 20th century, the world population of humans grew from 2.5 billion to over 6 billion.

59) Disasters occur where Earth unleashes its concentrated energy.

60) Given current technologies, humans have a realistic chance of escaping to another hospitable planet.

61) The influenza pandemic of 1918–1919 killed more people than World War I.

62) During 2016, the natural event that was responsible for the most disaster related deaths was \_\_\_\_\_\_\_\_.

A) floods

B) earthquakes

C) tsunamis

D) heat waves

63) Which type of disasters was the most expensive for the insurance industry for the period 1970-2017?

A) hurricanes

B) earthquakes

C) floods

D) winter storms

64) The growth rate from a few thousand people about 160,000 years ago to 7.5 billion in 2017 represents \_\_\_\_\_\_\_\_ growth.

A) linear

B) logarithmic

C) exponential

D) algebraic

65) In 2017, the projected population of the USA is projected to increase by \_\_\_\_\_\_\_\_ over the next 5 years.

A) 450 thousand

B) 45 million

C) 450 million

D) 4.5 million

66) In 2016, floods were responsible for about 40% of the fatalities.

67) Two of the top 40 costliest disasters occurred in 2016 alone and cost roughly $9 billion.