Chapter 19 Multiple Choice Questions

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

19.4 Multiple-Choice Questions

1)

The world's most abundant fossil fuel is \_\_\_\_\_\_\_\_.

A)

biodiesel

B)

coal

C)

oil

D)

natural gas

E)

methane

Answer:

B

2)

Before mining techniques improved in the 1700s, the resource that provided the greatest amount of energy for heating and cooking was \_\_\_\_\_\_\_\_.

A)

dung

B)

wood

C)

coal

D)

oil

E)

water

Answer:

B

3)

The debate over oil exploration, drilling, and extraction in ANWR has occurred, in part, because \_\_\_\_\_\_\_\_.

A)

the Gwich'in, one of the native Alaskan groups, depend on hunting caribou and fear that oil‑industry activity will reduce caribou herds

B)

the Gwich'in, one of the native Alaskan groups, see oil extraction as one of the few opportunities for economic development in the area

C)

many environmental scientists anticipate little impact on the environment

D)

oil company scientists admit that drilling operations in ANWR would damage vegetation and wildlife to a significant extent

E)

the Inupiat, one of the native Alaskan groups, depend on hunting caribou and fear that oil‑industry activity will reduce caribou herds

Answer:

A

4)

Which of the following energy sources is considered nonrenewable?

A)

fossil fuel energy

B)

sunlight (solar) energy

C)

geothermal energy

D)

tidal energy

E)

wind energy

Answer:

Solar radiation makes several other energy sources possible, including \_\_\_\_\_\_\_\_.

A)

wind energy

B)

tidal energy

C)

geothermal energy

D)

hydrothermal energy

E)

nuclear energy

Answer:

A

6)

For the United States, the primary fuel that we use for our energy is \_\_\_\_\_\_\_\_.

A)

wood

B)

natural gas

C)

coal

D)

oil

E)

nuclear

Answer:

D

7)

Scientists search for fossil fuels in many ways. Sending a sound wave into the ground (by exploding dynamite, thumping the ground with a large weight, or using an electric vibrating machine) and measuring its return to the surface at receiving stations is called \_\_\_\_\_\_\_\_.

A)

dynamite surveying

B)

destructive surveying

C)

seismic surveying

D)

sonar surveying

E)

geologic surveying

Answer:

C

8)

The entire pool of oil is not extracted from a well because \_\_\_\_\_\_\_\_.

A)

it is too destructive to the environment

B)

it is not cost‑effective

C)

in some areas it is too liquid to extract

D)

only a strip mine could fully extract it

E)

this is not correct; we often are able to extract the entire pool

Answer:

B

9)

In deciding whether to extract oil from a site and how much of the total to extract, an oil company considers \_\_\_\_\_\_\_\_.

A)

the distance the oil must be transported, current market price of oil, potential environmental damage

B)

the amount of greenhouse gases the oil will release when burned

C)

the current price of gasoline at the pump

D)

which nation will make the largest purchases

E)

the fraction of the oil that will go to fuels, plastics, synthetic fibers and lubricants

Answer:

A

10)

Secondary extraction of petroleum \_\_\_\_\_\_\_\_.

A)

occurs immediately after primary extraction

B)

is less expensive than primary extraction

C)

uses solvents, water, or steam

D)

allows the oil to be extracted to the last drop

E)

causes less environmental damage than tertiary extraction

Answer:

C

11)

Coal continues to be the main fuel used to generate electricity in the United States. This is partially because \_\_\_\_\_\_\_\_.

A)

the country has such large reserves of coal

B)

the quality of coal in the United States is very consistent from deposit to deposit

C)

coal causes almost no air pollution when burned

D)

coal deposits in the United States lie very close to the surface and are easily extracted

E)

coal contains very few impurities, such as sulfur, which cause problems in petroleum and natural gas

Answer:

A

12)

Crude oil is \_\_\_\_\_\_\_\_.

A)

composed of just a few types of hydrocarbon molecules

B)

usable in its raw form

C)

formed less than 100 yards below the surface; in deeper places with more pressure, coal is formed

D)

formed in a wide range of temperature and pressure circumstances

E)

fractionated to obtain the chemicals used for gasoline, lubricants, plastics and other products

Answer:

E

13)

Natural gas

A)

is a primary component in octane

B)

produces less greenhouse gases per energy unit than coal

C)

discovered by Bunsen in 1885

D)

will be depleted by 2030 at current usage rates

E)

is transported primarily by truck and rail

Answer:

B

14)

Deposits of natural gas are most numerous in \_\_\_\_\_\_\_\_.

A)

the Middle East

B)

Russia and the United States

C)

South America

D)

Panama

E)

Spain and Portugal

Answer:

B

15)

Natural gas is \_\_\_\_\_\_\_\_.

A)

trapped over some cities for commercial use

B)

only produced by bacteria during decomposition

C)

more damaging to the environment than coal

D)

still much more expensive than other fossil fuels

E)

often associated with coal and petroleum deposits

Answer:

E

16)

One of the problems with finding new fossil fuel deposits in developing countries is that \_\_\_\_\_\_\_\_.

A)

it is very expensive to transport the deposit elsewhere

B)

those countries tend to keep the resource for themselves, not sharing with other countries

C)

international companies move in to harvest the new deposit, and very little money or resource remains in the country

D)

their governments seldom allow extraction of the deposit without meeting expensive environmental regulations

E)

their governments seldom allow extraction of the deposit without imposing huge taxes to fund new social benefits for the country

Answer:

C

17)

Of the available policy options regarding eventual conversion to renewable energy sources, environmentalists would probably prefer that \_\_\_\_\_\_\_\_.

A)

we pass laws immediately banning the use of fossil fuels

B)

we pass laws immediately banning the exploration and development of further fossil fuel resources

C)

we encourage, with subsidies, tax rebates, and grants, the rapid development and widespread use of renewable alternative energy resources

D)

we prepare for a gradual changeover by slowly increasing funding and putting alternative energy resources into place over the next 100 years

E)

we plan for the switch to renewable energy sources, but not implement any plans until all fossil fuels have been depleted

Answer:

C

18)

The greatest damage to the environment caused by oil extraction is from \_\_\_\_\_\_\_\_.

A)

the drilling

B)

road construction and infrastructure development

C)

the development of the market in a new country

D)

the remediation and relocation

E)

the initial logging

Answer:

B

19)

Alaskans benefit from the trans‑Alaska pipeline because Alaska's state constitution requires approximately 25% of state revenues associated with the oil industry to be placed into a monetary fund called the Permanent Fund, which \_\_\_\_\_\_\_\_.

A)

is placed into fuel company pockets to reduce environmental damage

B)

pays for education of native Alaskans through scholarships

C)

pays yearly dividends to all Alaska residents

D)

is divided equally among the politicians in the state for running their offices

E)

is used for social infrastructure, such as hospitals, roads, and schools

Answer:

C

20)

Energy conservation in the United States \_\_\_\_\_\_\_\_.

A)

became a national policy in the 1970s following the OPEC embargo and continues today

B)

is not important to most citizens and is not supported by federal guidelines

C)

has not been important until recently, but new government funding of alternative energy sources is now spurring research and development

D)

has been driven by congressional action in the past 5 years; Congress has passed measures encouraging conservation, including increased fuel efficiency in cars

E)

has lagged as we wait for technology to improve, so that more efficient vehicles are possible

Answer:

B

21)

Energy conservation in the United States \_\_\_\_\_\_\_\_.

A)

can be accomplished only through changes in environmental laws

B)

is unlikely to ever occur

C)

can be accomplished by changes in tax laws

D)

will be a reality only if there is another major war

E)

can be improved as individuals make conscious choices to reduce personal consumption

Answer:

E

22)

Energy can be conserved by

A)

cogeneration in power plants, fuel efficient transportation, reengineered appliances

B)

cogeneration in automobiles, especially in SUVs

C)

replacing compact florescent with tungsten bulbs

D)

replacing mass transit with more and larger roads for cars and trucks

E)

repealing the Law of Entropy

Answer:

A

23)

The energy bill passed by the U.S. Congress in 2005 \_\_\_\_\_\_\_\_.

A)

primarily focused on major new policies for conservation and for development of renewable energy sources

B)

primarily focused on taxing polluters and those who profit from the fossil fuel industry

C)

will, according to analysts, help change our country's energy policies over the next 10 years

D)

should encourage the rapid development of the remaining fossil fuel resources

E)

included very little that will help to change our dependence on fossil fuels

Answer:

E

24)

Many developed nations have their economies closely tied to imported fossil fuels. One important consideration is that \_\_\_\_\_\_\_\_.

A)

the economy can be disrupted by the decisions made in fuel exporting nations

B)

the economy will only improve if the price of fossil fuels increases

C)

as supplies increase, fossil fuels decline in price

D)

if energy conservation is put into place, the cost of fossil fuels will decrease

E)

if energy conservation is put into place, the cost of fossil fuels will increase

Answer:

A

25)

When we burn fossil fuels, \_\_\_\_\_\_\_\_.

A)

we liberate carbon back into the carbon cycle, increasing the amount available for plant growth

B)

the resulting carbonic acid leads to acid rain

C)

the greatest environmental impact is the impact on the ozone layer

D)

the greatest environmental impact is increased greenhouse gases

E)

the greatest environmental impact is the local damage from extraction

Answer:

D

26)

The average miles per gallon rating of U.S. vehicles has \_\_\_\_\_\_\_\_.

A)

doubled in the past two decades

B)

slightly decreased in the past two decades

C)

now matched the 45 mpg rating mandated by the European union

D)

been the target of several bills now pending in Congress

E)

doubled since the 2004 election

Answer:

B

27)

Organizations like OPEC have formed \_\_\_\_\_\_\_\_.

A)

in order to take maximum advantage of developed nations dependence on imported oil

B)

to develop technologies to conserve non-renewable energy resources

C)

to protect their national members' petroleum reserves for their own use

D)

as a military alliance to protect developed nations' energy reserves

E)

to ensure that developing nations get their fair share of fossil fuels

Answer:

A

28)

U.S. oil production \_\_\_\_\_\_\_\_.

A)

is continuing to increase as demand decreases

B)

is sufficient to meet national needs thanks to major conservation efforts

C)

peaked out years ago, requiring imports of more than 60% of petroleum to meet demand

D)

is now high enough for us to export nearly 50%

E)

has to fit the quotas imposed by OPEC

Answer:

A