Plants and Society, 8e (Levetin)

Chapter 1 Plants in Our Lives

1) The consumption of meat by humans indirectly makes them \_\_\_\_\_\_\_\_.

A) primary consumers

B) secondary consumers

C) primary producers

D) secondary producers

E) herbivores

2) The process of photosynthesis produces these two end products:

A) carbon dioxide and sugar

B) oxygen and sugar

C) carbon dioxide and oxygen

D) water and carbon dioxide

E) water and sugar

3) Which of the following are the sexual parts of a flower?

A) stamens and carpels

B) carpels and sepals

C) sepals and petals

D) stamens and sepals

E) All of these are the sexual parts of a flower.

4) Which of the following is the study of the classification of plants?

A) Ethnobotany

B) Mycology

C) Systematics

D) Phycology

E) Palynology

5) Which of the following is not a defined property of life?

A) Growth and reproduction

B) Ability to respond to the environment

C) Organized structure

D) Ability to adapt and evolve as a population

E) All of the above are properties of life.

6) All of the following except one are examples of monocots. Choose the exception.

A) grasses

B) orchids

C) dandelions

D) lilies

E) All of these are examples of monocots.

7) What is the main importance of gymnosperms to human societies?

A) their seeds are important food sources

B) medicines for a wide variety of illnesses

C) wood for construction, fuel, and paper

D) floral arrangements

E) both their use as medicines and seeds for food

8) Toxic algal blooms are becoming more common due to which of the following?

A) natural causes

B) over harvesting of fish and other marine species

C) increased recreational activities on lakes and streams

D) increased nutrient pollution

E) More than one of these reasons are correct.

9) The most serious cause of crop loss is plant diseases caused by which of the following?

A) fungi

B) bacteria

C) viruses

D) insects

E) global warming

10) The Kingdom Fungi include which of the following organisms?

A) Molds

B) Mildews

C) Yeast

D) Mushrooms

E) All of the above are classified as fungi.

11) Which of the following is an important role that fungi play?

A) decomposers

B) fermenters

C) antibiotic producers

D) food source

E) All of these are important roles played by the Fungi.

12) What is the first step of hypothesis-driven science?

A) Hypothesis

B) Observation

C) Experimentation

D) Publication

E) Formulating a theory

13) Which of the following is the best definition of a scientific theory?

A) an explanation that is always supported by the facts and has never been disproved

B) an educated guess

C) a tentative explanation for an observed phenomenon

D) an observation observed so many times it is considered a fact

E) an undeniable truth supported by scientific evidence

14) The part of the Osage orange that was biologically mimicked by barbed wire to "tame the West" was its \_\_\_\_\_\_\_\_.

A) "hedge apples"

B) shaggy bark

C) bright orange wood

D) thorny branches

E) repellant chemicals

15) The opposite metabolic "partner" of photosynthesis is which of the following processes?

A) digestion

B) cellular respiration

C) ventilation (breathing)

D) production of hormones

E) DNA replication

16) Which of the following is not found in prokaryotic cells?

A) ribosomes

B) cell membrane

C) nucleus

D) DNA or RNA

E) cytoplasm

17) Which of the following is not necessary for an individual to survive?

A) metabolism

B) organized structure

C) organic composition

D) ability to respond to the environment

E) reproduction

18) Hereditary information in the cell is carried in which of the following?

A) carbohydrates

B) nucleic acids

C) proteins

D) lipids

E) More than one of the above are correct.

19) Of the four molecules of life, which of the following is not a major organic group of the human diet?

A) nucleic acids

B) carbohydrates

C) lipids

D) proteins

E) All of these are major organic groups of the human diet.

20) Which of the following is the proper order from least complex molecule to most complex?

A) glucose >> glycogen >> maltose

B) sucrose >> glucose >> starch

C) glucose >> maltose >> starch

D) maltose >> glucose >> sucrose

E) glycogen >> starch >> sucrose

21) Which of the following is(are) correct?

A) Many carbohydrates such as glucose are sources of energy for cells.

B) Glucose and fructose are monosaccharides.

C) The general formula for a six-carbon monosaccharide is C6H12O6.

D) Disaccharides are composed of two monosaccharides.

E) All of the above are correct.

22) The browning of apples is caused by the interaction of \_\_\_\_\_\_\_\_ and oxygen.

A) terpenes

B) alkaloids

C) glycosides

D) phenolics

E) resins

23) Which of the following carbohydrates cannot be used as an energy food source for humans?

A) cellulose

B) glucose

C) fructose

D) starch

E) sucrose

24) Glycogen is an energy storage molecule for which of the following organisms?

A) bacteria

B) plants

C) animals

D) fungi

E) All of the above organisms except plants can store glycogen.

25) Amino acids are the subunits of which of the following?

A) carbohydrates

B) lipids

C) nucleic acids

D) polypeptides and proteins

E) More than one of the above are correct.

26) Which type of lipid is most important in biological membranes?

A) fats

B) steroids

C) phospholipids

D) oils

E) triglycerides

27) Flowering plants are classified as which of the following?

A) gymnosperms

B) conifers

C) angiosperms

D) fungi

E) ferns

28) Which of the following secondary compounds are structurally similar to neurotransmitters and are mostly psychoactive?

A) saponins

B) tannins

C) flavonoids

D) terpenes

E) alkaloids

29) A biochemist discovers a molecule with a structure consisting of a phosphate group, a five-carbon sugar, and a nitrogenous base. This molecule is most likely classified as which of the following?

A) protein

B) carbohydrate

C) nucleic acid

D) lipid

E) secondary metabolite

30) Which of the following statements is correct?

A) Nucleic acids are composed of repeating units called nucleotides.

B) A nucleotide consists of a sugar, a phosphate group, and a nitrogenous base.

C) DNA is deoxyribonucleic acid.

D) The sequence of bases in DNA make up genes.

E) All of the above are correct.

31) All of the following are characteristics of fungi except one. Choose the exception.

A) reproduction by seeds

B) nonphotosynthetic cells

C) store glucose as glycogen

D) many are decomposers of organic matter

E) All of these are characteristics of the fungi.

32) The four parts of a typical angiosperm flower are \_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_.

33) The two groups of flowering plants are \_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_.

34) Whereas angiosperms produce seeds in \_\_\_\_\_\_\_\_, most gymnosperms produce seeds in \_\_\_\_\_\_\_\_.

35) In science, a tentative explanation for an observation is called a(n) \_\_\_\_\_\_\_\_.

36) The invention of Velcro was inspired by the plant \_\_\_\_\_\_\_\_.

37) Sucrose is a disaccharide consisting of \_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_.

38) One difference between RNA and DNA is that DNA contains the nitrogenous base \_\_\_\_\_\_\_\_, whereas RNA contains the nitrogenous base \_\_\_\_\_\_\_\_.

39) Amino acids are attached to each other in a protein by \_\_\_\_\_\_\_\_ bonds.

40) Amino acids differ from each other by the structure of their \_\_\_\_\_\_\_\_.

41) Starch is a carbohydrate form of energy storage in \_\_\_\_\_\_\_\_.

42) A polysaccharide that is a structural component of plant cell walls is starch.

43) The true algae comprise a group of eukaryotic photosynthetic organisms that are found mostly in aquatic environments, where they often form the base of the food chain.

44) DNA consists of complementary base pairs of AT and GC; RNA consists of base pairs AU and GC.

45) An angiosperm fruit develops from the flower part called the carpel.

46) Of all the algae, only the brown algae are considered part of the plant kingdom.

47) Fungi and plants form a symbiotic relationship known as lichens.

48) Cocklebur is the plant that inspired the invention of barbed wire.