CONNECTICUT BIOLOGY · FINAL EXAM · 50 QUESTIONS

Final Exam — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **Which term matches this description: the organelle storing most DNA in a eukaryotic cell**

- A Cell membrane
- B Golgi apparatus
- C Nucleus
- D Lysosome

Understand It with Pulse | Flag a mistake

2 **Which term matches this description: a version of a gene**

- A Dominant allele
- B Allele
- C Recessive allele
- D Genotype

Understand It with Pulse | Flag a mistake

3 **Which term matches this description: a trait improving survival in an environment**

A Variation

B Adaptation

C Fitness

D Speciation

Understand It with Pulse | Flag a mistake

4 **Which term matches this description: the place where an organism lives**

A Niche

B Habitat

C Producer

D Consumer

Understand It with Pulse | Flag a mistake

5 **Which term matches this description: a protein speeding up a chemical reaction**

- A Active site
- B Denaturation
- C Enzyme
- D DNA

Understand It with Pulse | Flag a mistake

6 **Which term matches this description: the genetic makeup of an organism**

- A Genotype
- B Phenotype
- C Homozygous
- D Heterozygous

Understand It with Pulse | Flag a mistake

7 **Which term matches this description: remains or traces of an ancient organism**

A Homologous structure

B Fossil

C Analogous structure

D Vestigial structure

Understand It with Pulse | Flag a mistake

8 **Which term matches this description: an organism breaking down dead material**

A Food chain

B Decomposer

C Food web

D Trophic level

Understand It with Pulse | Flag a mistake

9 **Which term matches this description: the large organelle storing water in a plant cell**

- A Cytoskeleton
- B Endoplasmic reticulum
- C Cell theory
- D Central vacuole

Understand It with Pulse | Flag a mistake

10 **Which term matches this description: having two different alleles for a gene**

- A Punnett square
- B Meiosis
- C Mitosis
- D Heterozygous

Understand It with Pulse | Flag a mistake

11 **Which term matches this description: a structure reduced and no longer fully functional**

A Vestigial structure

B Common ancestor

C Genetic drift

D Gene flow

Understand It with Pulse | Flag a mistake

12 **Which term matches this description: a feeding level in an ecosystem**

A Trophic level

B Photosynthesis

C Cellular respiration

D Carbon cycle

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13 **Which term matches this description: the idea that all living things are made of cells**

A Diffusion

B Osmosis

C Cell theory

D Active transport

Understand It with Pulse | Flag a mistake

14 **Which term matches this description: cell division producing two identical daughter cells**

A Mutation

B Chromosome

C Mitosis

D Gamete

Understand It with Pulse | Flag a mistake

15 **Which term matches this description: movement of alleles between populations**

A Bottleneck effect

B Founder effect

C Artificial selection

D Gene flow

Understand It with Pulse | Flag a mistake

16 **Which term matches this description: movement of carbon through living and nonliving things**

A Nitrogen cycle

B Water cycle

C Carrying capacity

D Carbon cycle

Understand It with Pulse | Flag a mistake

17 **Which term matches this description: the organelle where photosynthesis takes place**

A Central vacuole

B Cytoskeleton

C Chloroplast

D Endoplasmic reticulum

Understand It with Pulse | Flag a mistake

18 **Which term matches this description: a reproductive cell such as an egg or sperm**

A Zygote

B Gamete

C Crossing over

D Independent assortment

Understand It with Pulse | Flag a mistake

19 **Which term matches this description: survival of bacteria despite an antibiotic**

A Biodiversity

B Extinction

C Phylogeny

D Antibiotic resistance

Understand It with Pulse | Flag a mistake

20 **Which term matches this description: a factor restricting population growth**

A Competition

B Predation

C Symbiosis

D Limiting factor

Understand It with Pulse | Flag a mistake

21 **Which term matches this description: loss of enzyme shape from heat or pH change**

A Denaturation

B DNA

C Transcription

D Translation

Understand It with Pulse | Flag a mistake

22 **Which term matches this description: separate inheritance of different genes**

A Independent assortment

B Pedigree

C Carrier

D Sex linked trait

Understand It with Pulse | Flag a mistake

23 **Which term matches this description: the evolutionary history of a group**

A Cladogram

B Natural selection

C Phylogeny

D Adaptation

Understand It with Pulse | Flag a mistake

24 **Which term matches this description: a close relationship between two species**

A Mutualism

B Ecosystem

C Symbiosis

D Habitat

Understand It with Pulse | Flag a mistake

25 **Which statement about Mitochondrion is correct**

A the organelle producing most of a cell ATP

B the organelle assembling proteins from amino acids

C the organelle storing most DNA in a eukaryotic cell

D the structure controlling what enters and leaves a cell

Understand It with Pulse | Flag a mistake

26 **Which statement about Gene is correct**

A a DNA segment coding for a trait

B a version of a gene

C an allele expressed when present

D an allele expressed only with two copies

Understand It with Pulse | Flag a mistake

27 **Which statement about Adaptation is correct**

A differences among individuals in a population

B a trait improving survival in an environment

C reproductive success in an environment

D formation of a new species

Understand It with Pulse | Flag a mistake

28 **Which statement about Habitat is correct**

A the role of an organism in its ecosystem

B the place where an organism lives

C an organism making its own food

D an organism eating other organisms

Understand It with Pulse | Flag a mistake

29 **Which statement about Cell membrane is correct**

A the organelle packaging proteins for transport

B the organelle breaking down worn out cell parts

C the organelle where photosynthesis takes place

D the structure controlling what enters and leaves a cell

Understand It with Pulse | Flag a mistake

30 **Which statement about Recessive allele is correct**

A the genetic makeup of an organism

B the observable traits of an organism

C having two identical alleles for a gene

D an allele expressed only with two copies

Understand It with Pulse | Flag a mistake

31 **Which statement about Fossil is correct**

A a structure with common ancestry but different function

B remains or traces of an ancient organism

C a structure with similar function but different ancestry

D a structure reduced and no longer fully functional

Understand It with Pulse | Flag a mistake

32 **Which statement about Decomposer is correct**

A a sequence showing feeding relationships

B an organism breaking down dead material

C a network of overlapping food chains

D a feeding level in an ecosystem

Understand It with Pulse | Flag a mistake

33 **Which statement about Chloroplast is correct**

- A the large organelle storing water in a plant cell
- B the network giving a cell its shape
- C the organelle where photosynthesis takes place
- D the network transporting materials inside a cell

Understand It with Pulse | Flag a mistake

34 **Which statement about Homozygous is correct**

- A having two different alleles for a gene
- B a diagram predicting offspring genotypes
- C having two identical alleles for a gene
- D cell division producing gametes with half the chromosomes

Understand It with Pulse | Flag a mistake

35 **Which statement about Vestigial structure is correct**

A a structure reduced and no longer fully functional

B an ancestor shared by two or more species

C random change in allele frequencies

D movement of alleles between populations

Understand It with Pulse | Flag a mistake

36 **Which statement about Trophic level is correct**

A a feeding level in an ecosystem

B using light energy to make food from carbon dioxide and water

C releasing energy by breaking down glucose

D movement of carbon through living and nonliving things

Understand It with Pulse | Flag a mistake

37 **Which term matches this description: copying a DNA sequence into messenger RNA**

A Translation

B Mitochondrion

C Transcription

D Ribosome

Understand It with Pulse | Flag a mistake

38 **Which statement about Meiosis is correct**

A cell division producing two identical daughter cells

B cell division producing gametes with half the chromosomes

C a change in a DNA sequence

D a structure of coiled DNA and protein

Understand It with Pulse | Flag a mistake

39 **Which statement about Gene flow is correct**

- A loss of diversity after a sharp population drop
- B reduced diversity from a small founding group
- C breeding chosen by humans for desired traits
- D movement of alleles between populations

Understand It with Pulse | Flag a mistake

40 **Which statement about Carbon cycle is correct**

- A movement of nitrogen through ecosystems
- B movement of water through evaporation and precipitation
- C the largest population an environment can support
- D movement of carbon through living and nonliving things

Understand It with Pulse | Flag a mistake

41 **Which statement about Osmosis is correct**

A diffusion of water across a membrane

B movement against a gradient using ATP

C a protein speeding up a chemical reaction

D the part of an enzyme where a substrate binds

Understand It with Pulse | Flag a mistake

42 **Which statement about Chromosome is correct**

A a structure of coiled DNA and protein

B a reproductive cell such as an egg or sperm

C a cell formed by fusion of two gametes

D exchange of segments between homologous chromosomes

Understand It with Pulse | Flag a mistake

43 **A population of 100 bacteria doubles every hour for 3 hours. The population after 3 hours is**

ANSWER _____

Understand It with Pulse | Flag a mistake

44 **A food chain has 1000 units of energy at the producer level. About 10 percent transfers to the next level. The energy at the next level is**

ANSWER _____

Understand It with Pulse | Flag a mistake

45 **One cell divides by mitosis four times in a row with no cells dying How many cells result**

ANSWER _____

Understand It with Pulse | Flag a mistake

46 **A cross of two heterozygous parents for a dominant trait gives, in a simplified model, the number of offspring out of 4 expected to show the dominant trait**

ANSWER _____

Understand It with Pulse | Flag a mistake

47 **A species splits into 2 groups, and each splits again. The number of groups is**

ANSWER _____

Understand It with Pulse | Flag a mistake

48 **Ten percent of 2000 units of energy transfers to herbivores. The energy transferred is**

ANSWER _____

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49 **One cell divides by mitosis three times in a row with no cells dying How many cells result**

ANSWER _____

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50 **A human gamete has 23 chromosomes. After fertilization, the zygote normally has**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	C	**18.**	B	**35.**	A
2.	B	**19.**	D	**36.**	A
3.	B	**20.**	D	**37.**	C
4.	B	**21.**	A	**38.**	B
5.	C	**22.**	A	**39.**	D
6.	A	**23.**	C	**40.**	D
7.	B	**24.**	C	**41.**	A
8.	B	**25.**	A	**42.**	A
9.	D	**26.**	A	**43.**	800
10.	D	**27.**	B	**44.**	100
11.	A	**28.**	B	**45.**	16
12.	A	**29.**	D	**46.**	3
13.	C	**30.**	D	**47.**	4
14.	C	**31.**	B	**48.**	200
15.	D	**32.**	B	**49.**	8
16.	D	**33.**	C	**50.**	46
17.	C	**34.**	C		

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