



THIS INCLUDE
Quick Review
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Answer Keys

MYTHOLOGY

The study of old ideas

LAMARCK

A scientist who gave theory of “Inheritance of Acquire Characters”

LAMACRKISM

The theory given by Lamarck. Original name of his theory is Inheritance of acquired characters.

PHILOSOPHIE ZOOLOGIQUE:

A book written by Lamarck. It is in French language

WEISMANN

A scientist who apposed Lamarck and conducted experiments on the tail of mice. He did cut the tails of parents and crossed 10 generations, but in all new generations, the offspring were born with tail.

CHARLS DARWIN

A scientist who gave theory of Natural selection

ORIGIN OF SPECIES

A book written by Darwin

ATAVISM

Appearance of characters of ancestors. For example some children are born with tail. These children are called **Coxy children**.

BIONOMINAL NOMENCULTURE

System of naming the living organisms

LINNAEUS

The father of taxonomy

VESTIGIAL ORGANS

Organs which are still present in body but they are functionless. For example appendix of human digestive

system

GENETIC DRIFT

Any change in gene pool of small population due to chance

GENE POOL

All the genes in population at any one time

GENETIC RECOMBINATION

Production of chromosome having different gene than original chromosome

GENETIC EQUILIBRIUM

If the frequency of genes in population remains same

PLEOTROPIC GENE

A gene which affects more than one character

SPECIES

Organisms which can inter-breed and produce offspring. E.g. all human beings are one species

SPECIATION

The making (formation) of new species

PHYLETIC EVOLUTION

A type of new species formation where genetic change occurs without undergoing reproduction

SYMPATRIC SPECIES

Closely related species which live in same geographical location

ALLOPATRIC SPECIES

Closely related species which live in different geographical location

STERILITY

A condition in which organism is unable to reproduce

GENE FREQUENCY

The proportion of different alleles in population

PRACTICE SHEET 01

1. The end result of natural selection is pre-desired.
- (A) True
(B) **false**
2. An adaptation is a trait that helps an organism to be more suited to its environment.
(A) **true**
(B) false
3. Lamarck said that adaptive traits are represented in each succeeding generation.
(A) **true**
(B) false
4. For Darwin, variations were not essential to the natural selection process.
(A) true
(B) **false**
5. New variations are harmful as helpful to the organism.
(A) true
(B) **false**
6. Darwin noted that when humans carry out artificial selection, they select the animals that will reproduce.
(A) **true**
(B) false
7. Lamarck supported the idea of inheritance of acquired characteristics.
(A) **true**
(B) false
8. Darwin saw that the available resources were not sufficient for all members of a population to survive.
(A) **true**
(B) false
9. According to pre-Darwinian thinking, which of the following statements are true?
a. earth is relatively young
b. species are related by descent
c. adaptation to the environment is the work of a creator
d. **both a and c**
10. Carolus Linnaeus believed in
a. **special creation.**
b. fixity of species.
c. both a and b.
d. neither a or b.
11. _____ occupied the last rung of Linnaeus's sequential ladder of life.
a. Plants
b. **Humans**
c. Birds
d. Reptiles

12. Fossils allow us to deduce that reptiles preceded _____ in the history of life.
- birds**
 - amphibians
 - mammals
 - both a and c
13. Preconditions of natural selection include
- the members of a population have heritable variations.
 - in a population, many more individuals are produced each generation than can survive and reproduce.
 - some individuals can survive and reproduce better than other individuals.
 - all of the above.**
14. Jean-Baptiste de Lamarck was the first biologist to
- support common descent clearly.
 - link diversity with adaptation to the environment.**
 - both a and b.
15. Each generation has a(n) _____ reproductive potential than the previous generation.
- equal
 - greater
 - lesser**
16. _____ proposed natural selection as a process to explain the origin of species.
- Lyell
 - Wallace**
 - Hutton
17. Where are marsupials found today?
- Australia**
 - South America
 - both a and b
18. Which lacked placental mammals?
- Australia**
 - South America
 - both a and b
19. Mutations occur in a set pattern.
- True
false
20. Mutations cause a gene pool to have multiple alleles of each gene.
- True**
false
21. Gene flow tends to increase the diversity between populations.
- true
false
22. Sexual reproduction alone cannot bring about a change in allele frequencies.
- true
false
23. Translocations are when a segment of chromosome is inverted.

true
false

24. Exposure to a drug causes a bacteria to become resistant.
true
false
25. Gene mutations are the ultimate source of variation.
true
false
26. Fitness is the extent to which an individual
- enjoys reproductive success.
 - contributes fertile offspring to the next generation.
 - both a and b.**
 - neither a or b.
27. Evolution by natural selection requires
- variation.
 - inheritance.
 - differential adaptedness and reproduction.
 - all of the above.**
88. After populations become adapted to their environment, variation is still _____ by various organisms.
- promoted
 - maintained
 - both a and b**
 - neither a or b
29. Random mating occurs when individuals pair up
- according to their genotypes.
 - by chance.**
 - according to their phenotypes.
 - both a and b.
30. Chromosome mutations are
- an alteration in the number of chromosomes inherited.
 - an alteration in the arrangement of the alleles on the chromosomes.
 - either a or b.**
 - neither a or b.
31. In sexually reproducing organisms, _____ is (are) an important source of variation.
- gene mutations
 - chromosome mutations
 - recombination of alleles and chromosomes
 - all of the above**
32. A mutation can be _____ to an organism.
- beneficial
 - neutral in its effect
 - harmful
 - any of the above**
33. Variations arise by
- gene mutations.

- b. chromosome mutations.
 - c. recombination.
 - d. **all of the above.**
34. Because of common descent, all organisms
- a. **use DNA as the genetic material.**
 - b. use ATP as the energy molecule.
 - c. have the same 20 amino acids in their proteins.
 - d. all of the above.
35. Variations arise by
- a. a gene mutation.
 - b. acquired characteristics.
 - c. environmental factors.
 - d. **all of the above.**

ANSWER KEY

QUESTION NO.	ANSWER KEY
1.	B
2.	A
3.	A
4.	B
5.	B
6.	A
7.	A
8.	A
9.	D
10.	A
11.	B
12.	A
13.	D
14.	B
15.	C
16.	B
17.	A
18.	A
19.	B
20.	A
21.	A
22.	B
23.	B
24.	A
25.	A
26.	C

27.	D
28.	C
29.	B
30.	C
31.	D
32.	D
33.	D
34.	A
35.	D