

High School Palaeontology Quiz

Palaeontology · Answer Key · 15 Questions

1. Which of the following is the most common type of fossil preservation, where original organic material is replaced by minerals?

- A) Carbonisation
- B) Mould and cast
- C) Permineralisation**
- D) Unaltered remains

2. The geological era known for the diversification of mammals and the rise of flowering plants is the:

- A) Mesozoic Era
- B) Palaeozoic Era
- C) Cenozoic Era**
- D) Proterozoic Eon

3. Fossils that are widespread geographically, existed for a relatively short period of time, and are useful for dating rock layers are called:

- A) Trace fossils
- B) Index fossils**
- C) Body fossils
- D) Coprolites

4. The process by which organisms with traits better suited to their environment tend to survive and reproduce more offspring is known as:

- A) Genetic drift
- B) Natural selection**
- C) Artificial selection
- D) Speciation

5. Which of these groups of organisms first appeared during the Cambrian Explosion, a period of rapid evolutionary diversification?

- A) Mammals
- B) Amphibians
- C) Invertebrates with hard parts**
- D) Dinosaurs

6. The principle of superposition states that in undisturbed rock layers, the oldest rocks are found:

- A) At the top
- B) In the middle
- C) At the bottom**
- D) Interspersed with younger rocks

7. Fossilised dinosaur footprints are an example of which type of fossil?

- A) Body fossil
- B) Trace fossil**
- C) Mould fossil
- D) Amber fossil

8. The extinction event that wiped out approximately 96% of marine species and 70% of terrestrial vertebrate species is known as the:

- A) Cretaceous-Paleogene extinction
- B) Permian-Triassic extinction**
- C) Triassic-Jurassic extinction
- D) Ordovician-Silurian extinction

9. Which geological eon is characterised by the formation of the Earth and the earliest life forms, including prokaryotes?

- A) Phanerozoic
- B) Proterozoic
- C) Archean
- D) Hadean**

10. The preserved remains of plants and animals found in sedimentary rock are often the result of:

- A) Volcanic activity
- B) Erosion
- C) Fossilisation**
- D) Metamorphism

11. Trilobites are extinct marine arthropods that are commonly found as fossils from which geological era?

- A) Mesozoic Era
- B) Cenozoic Era
- C) Palaeozoic Era**
- D) Precambrian Era

12. The study of fossils and the ancient life they represent is called:

- A) Archaeology
- B) Geology
- C) Palaeontology**
- D) Biology

13. Which of the following best describes the process of a mould fossil?

- A) The original hard parts of an organism are dissolved away, leaving a cavity.**
- B) The original organic material is replaced by minerals.
- C) An organism is preserved in hardened tree sap.
- D) The organic material is compressed into a thin film of carbon.

14. The 'Age of Reptiles' is another name for which geological era?

- A) Palaeozoic Era
- B) Mesozoic Era**
- C) Cenozoic Era
- D) Archean Eon

15. What is the primary scientific method used by palaeontologists to determine the age of a fossil or the rock layer it is found in?

- A) Radiocarbon dating
- B) Relative dating (using stratigraphy)
- C) Absolute dating (using radioactive isotopes)**
- D) Comparative anatomy