

Fundamentals of Palaeontology

Palaeontology · Answer Key · 15 Questions

1. Which geological period is famously known as the 'Age of Fishes'?

- A) Devonian**
- B) Cambrian
- C) Permian
- D) Triassic

2. What is the primary substance that replaces organic material during the process of permineralization?

- A) Amber
- B) Mineral deposits**
- C) Volcanic ash
- D) Ice

3. Which group of dinosaurs is traditionally classified as 'bird-hipped'?

- A) Theropods
- B) Sauropods
- C) Ornithischians**
- D) Ceratopsians

4. What is a 'trace fossil' most accurately defined as?

- A) A preserved footprint or burrow**
- B) A fossilized tooth
- C) A cast of a shell
- D) A microscopic bone fragment

5. The K-Pg extinction event, which occurred approximately 66 million years ago, marks the end of which era?

- A) Paleozoic
- B) Cenozoic
- C) Mesozoic**
- D) Precambrian

6. Which index fossil is commonly used to date rocks from the Ordovician period?

- A) Trilobites
- B) Ammonites
- C) Graptolites**
- D) Mammoths

7. What defines a 'holotype' specimen in palaeontological taxonomy?

- A) A specimen found in the most recent layer
- B) The original single specimen used to describe a new species**
- C) A fossil that has been reconstructed
- D) The largest specimen of a species found

8. Coprolites are fossilized remnants of what biological material?

- A) Skin impressions
- B) Fecal matter**
- C) Feathers
- D) Internal organs

9. Which period saw the first appearance of shelled cephalopods?

- A) Cambrian**
- B) Jurassic
- C) Cretaceous
- D) Carboniferous

10. What is the study of the processes that affect animal and plant remains as they become fossilized called?

- A) Stratigraphy
- B) Taphonomy**
- C) Taxonomy
- D) Paleoclimatology

11. Which of the following is considered a 'living fossil' that has remained largely unchanged for millions of years?

- A) Coelacanth**
- B) Dodo
- C) Tyrannosaurus
- D) Velociraptor

12. What major evolutionary transition occurred during the Carboniferous period?

- A) Development of the amniotic egg**
- B) Evolution of flight in birds
- C) The first appearance of mammals
- D) The extinction of trilobites

13. In which type of rock are the vast majority of fossils discovered?

- A) Igneous
- B) Metamorphic
- C) Sedimentary**
- D) Volcanic

14. Which dinosaur group is characterized by long necks and heavy, four-legged builds?

- A) Theropoda
- B) Sauropodomorpha**
- C) Thyreophora
- D) Marginocephalia

15. What is the primary limitation of radiocarbon dating in palaeontology?

- A) It cannot date inorganic matter
- B) It only works on fossils older than 1 billion years
- C) It requires radioactive sunlight
- D) It is only effective for samples up to approximately 50,000 years old**