

50 Important MCQs: The Origin and Evolution of the Earth - Geography GK Part – 1

GK Questions:

1. Which theory proposes that the Earth and other planets formed from a rotating cloud of gas and dust?
 - a) Big Bang Theory
 - b) Nebular Hypothesis**
 - c) Tidal Theory
 - d) Planetesimal Hypothesis
2. Who proposed the Nebular Hypothesis for the origin of the solar system?
 - a) Isaac Newton
 - b) Immanuel Kant**
 - c) Edwin Hubble
 - d) Galileo Galilei
3. The Big Bang Theory is associated with the origin of:
 - a) The Universe**
 - b) The Earth
 - c) The Moon
 - d) The Solar System
4. Approximately how old is the Earth, based on scientific estimates?
 - a) 12 years
 - b) 12 million years
 - c) 4.6 billion years**
 - d) 12 billion years
5. What is the primary source of energy for the formation of the solar system?
 - a) Nuclear fission
 - b) Gravitational collapse**
 - c) Electromagnetic radiation
 - d) Geothermal energy
6. Which gas was dominant in the early Earth's atmosphere?
 - a) Methane**
 - b) Oxygen
 - c) Nitrogen
 - d) Carbon dioxide

7. **The process of accretion refers to:**
 - a) The cooling of the Earth's core
 - b) The accumulation of particles to form planets**
 - c) The splitting of continents
 - d) The formation of oceans
8. **Which theory suggests that the Moon was formed from debris ejected after a collision between Earth and a Mars-sized body?**
 - a) Capture Theory
 - b) Fission Theory
 - c) Giant Impact Hypothesis**
 - d) Co-accretion Theory
9. **The geological time scale divides Earth's history into:**
 - a) Days and weeks
 - b) Years and decades
 - c) Eons, eras, periods, and epochs**
 - d) Centuries and millennia
10. **Which eon marks the formation of the Earth and the earliest rocks?**
 - a) Hadean Eon**
 - b) Archean Eon
 - c) Proterozoic Eon
 - d) Phanerozoic Eon
11. **The primary source of Earth's internal heat is:**
 - a) Solar radiation
 - b) Radioactive decay**
 - c) Volcanic eruptions
 - d) Tidal forces
12. **Which layer of the Earth was formed first during its differentiation?**
 - a) Crust
 - b) Mantle
 - c) Core**
 - d) Lithosphere
13. **The process by which Earth's layers were separated based on density is called:**
 - a) Convection
 - b) Differentiation**
 - c) Sedimentation
 - d) Erosion

14. Which gas, absent in Earth's early atmosphere, became abundant due to photosynthetic organisms?
- a) Nitrogen
 - b) Carbon dioxide
 - c) **Oxygen**
 - d) Methane
15. The supercontinent that existed around 300 million years ago is called:
- a) Gondwana
 - b) **Pangaea**
 - c) Laurasia
 - d) Rodinia
16. The theory of continental drift was proposed by:
- a) Charles Darwin
 - b) **Alfred Wegener**
 - c) Harry Hess
 - d) James Hutton
17. Which evidence supported the theory of continental drift?
- a) Magnetic reversal patterns
 - b) **Fossil distribution across continents**
 - c) Ocean currents
 - d) Earthquake patterns
18. The theory of plate tectonics explains:
- a) The formation of the solar system
 - b) **The movement of Earth's lithospheric plates**
 - c) The origin of life
 - d) The cooling of Earth's core
19. Which era is known as the "Age of Reptiles"?
- a) Paleozoic Era
 - b) **Mesozoic Era**
 - c) Cenozoic Era
 - d) Proterozoic Eon
20. The oldest rocks on Earth, found in Canada, belong to which eon?
- a) **Archean Eon**
 - b) Hadean Eon
 - c) Proterozoic Eon
 - d) Phanerozoic Eon

21. Which event marked the boundary between the Mesozoic and Cenozoic eras?

- a) Formation of Pangaea
- b) Mass extinction of dinosaurs**
- c) Emergence of mammals
- d) Formation of the Himalayas

22. The Earth's magnetic field is primarily generated by:

- a) Solar wind
- b) Dynamo effect in the outer core**
- c) Crustal movements
- d) Volcanic activity

23. Which of the following is NOT a layer of the Earth?

- a) Crust
- b) Mantle
- c) Core
- d) Atmosphere**

24. The first life forms on Earth were likely:

- a) Mammals
- b) Single-celled prokaryotes**
- c) Dinosaurs
- d) Plants

25. The process of outgassing contributed to the formation of:

- a) Earth's core
- b) Earth's early atmosphere**
- c) Earth's magnetic field
- d) Earth's crust

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26. Which period is known for the dominance of dinosaurs?

- a) Cambrian
- b) Devonian
- c) Jurassic**
- d) Quaternary

27. The Earth's crust is thinnest under:

- a) Oceans**

- b) Mountains
 - c) Plains
 - d) Plateaus
28. Which gas was NOT a major component of Earth's primordial atmosphere?
- a) Methane
 - b) Ammonia
 - c) Water vapor
 - d) Oxygen**
29. The supercontinent Rodinia existed during which eon?
- a) Hadean Eon
 - b) Archean Eon
 - c) Proterozoic Eon**
 - d) Phanerozoic Eon
30. The Great Oxygenation Event occurred during which eon?
- a) Hadean Eon
 - b) Archean Eon**
 - c) Proterozoic Eon
 - d) Phanerozoic Eon
31. Which scientist proposed the sea-floor spreading hypothesis?
- a) Alfred Wegener
 - b) Harry Hess**
 - c) Charles Lyell
 - d) James Hutton
32. The Earth's lithosphere is broken into:
- a) Continents
 - b) Tectonic plates**
 - c) Oceans
 - d) Fault lines
33. Which era is known as the "Age of Mammals"?
- a) Paleozoic Era
 - b) Mesozoic Era
 - c) Cenozoic Era**
 - d) Proterozoic Eon
34. The oldest fossils of complex life forms are found in which period?
- a) Cambrian**
 - b) Devonian

- c) Permian
 - d) Triassic
35. **The Earth's core is primarily composed of:**
- a) Silicon and oxygen
 - b) Iron and nickel**
 - c) Aluminum and magnesium
 - d) Carbon and sulfur
36. **Which process is responsible for the movement of tectonic plates?**
- a) Erosion
 - b) Convection in the mantle**
 - c) Sedimentation
 - d) Volcanism
37. **The formation of the Himalayas is a result of:**
- a) Volcanic activity
 - b) Continental collision**
 - c) Sea-floor spreading
 - d) Earthquake activity
38. **Which eon is characterized by the absence of life on Earth?**
- a) Hadean Eon**
 - b) Archean Eon
 - c) Proterozoic Eon
 - d) Phanerozoic Eon
39. **The theory that suggests the Earth and Moon formed together from the same material is:**
- a) Giant Impact Hypothesis
 - b) Capture Theory
 - c) Co-accretion Theory**
 - d) Fission Theory
40. **Which period is known as the "Age of Fishes"?**
- a) Cambrian
 - b) Devonian**
 - c) Permian
 - d) Cretaceous
41. **The Earth's magnetic field protects it from:**
- a) Volcanic eruptions
 - b) Solar wind**
 - c) Earthquakes
 - d) Tsunamis

42. Which of the following is a feature of the Earth's continental crust?
- a) Thinner than oceanic crust
 - b) Rich in silica and aluminum**
 - c) Denser than oceanic crust
 - d) Primarily composed of iron
43. The first continents on Earth were formed during which eon?
- a) Archean Eon**
 - b) Hadean Eon
 - c) Proterozoic Eon
 - d) Phanerozoic Eon
44. Which gas became abundant in Earth's atmosphere due to the Great Oxygenation Event?
- a) Nitrogen
 - b) Carbon dioxide
 - c) Oxygen**
 - d) Methane
45. The breakup of Pangaea began during which period?
- a) Permian
 - b) Triassic**
 - c) Jurassic
 - d) Cretaceous
46. Which of the following is NOT a source of Earth's internal heat?
- a) Radioactive decay
 - b) Residual heat from formation
 - c) Gravitational compression
 - d) Solar radiation**
47. The Earth's outer core is primarily in which state?
- a) Solid
 - b) Liquid**
 - c) Gas
 - d) Plasma
48. Which type of rock forms the majority of the Earth's crust?
- a) Sedimentary
 - b) Metamorphic
 - c) Igneous**
 - d) Fossilized
49. The Cambrian Explosion refers to:
- a) Formation of the Earth's core

b) **Rapid diversification of life forms**

c) Breakup of Pangaea

d) Great Oxygenation Event

50. Which scientist is known as the "Father of Geology" for his contributions to understanding Earth's history?

a) Alfred Wegener

b) Harry Hess

c) **James Hutton**

d) Charles Darwin

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Answer Key

1. b) **Nebular Hypothesis**
2. b) **Immanuel Kant**
3. a) **The Universe**
4. c) **4.6 billion years**
5. b) **Gravitational collapse**
6. a) **Methane**
7. b) **The accumulation of particles to form planets**
8. c) **Giant Impact Hypothesis**

9. c) Eons, eras, periods, and epochs
10. a) Hadean Eon
11. b) Radioactive decay
12. c) Core
13. b) Differentiation
14. c) Oxygen
15. b) Pangaea
16. b) Alfred Wegener
17. b) Fossil distribution across continents
18. b) The movement of Earth's lithospheric plates
19. b) Mesozoic Era
20. a) Archean Eon
21. b) Mass extinction of dinosaurs
22. b) Dynamo effect in the outer core
23. d) Atmosphere
24. b) Single-celled prokaryotes
25. b) Earth's early atmosphere
26. c) Jurassic
27. a) Oceans
28. d) Oxygen
29. c) Proterozoic Eon
30. b) Archean Eon
31. b) Harry Hess
32. b) Tectonic plates
33. c) Cenozoic Era
34. a) Cambrian

- 35. b) Iron and nickel
- 36. b) Convection in the mantle
- 37. b) Continental collision
- 38. a) Hadean Eon
- 39. c) Co-accretion Theory
- 40. b) Devonian
- 41. b) Solar wind
- 42. b) Rich in silica and aluminum
- 43. a) Archean Eon
- 44. c) Oxygen
- 45. b) Triassic
- 46. d) Solar radiation
- 47. b) Liquid
- 48. c) Igneous
- 49. b) Rapid diversification of life forms
- 50. c) James Hutton.

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