

QUICK DRILL · CBSE CLASS 11

Interior of the Earth

Geography · Chapter 3 · 15 MCQs · 20 minutes · PYQ-tagged with time budgets

DATE	TOTAL MARKS 15	DURATION 20 min	MARKING +1 / 0	TARGET ≥ 12/15
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OBJECTIVES

Reinforce the four core topics of Interior of the Earth via 15 PYQ-derived MCQs. Identify weak sub-topics via concept-node IDs (see answer key). Build per-question time budget habit.

INSTRUCTIONS

Attempt all 15. Time budget shown per Q (use it as pacing guide). Mark answers (A/B/C/D) in the margin. Answer key + explanations on the last page. **Don't peek — score yourself honestly.**

SECTION · QUICK DRILL

Q 1-15 · 20 MIN

Q1. The deepest hole ever drilled into the earth, the Kola Superdeep Borehole, reached a depth of about:

- (A) 120 km (B) 12 km
(C) 1,200 km (D) 2,900 km

PYQ 2021 · School Annual · 1m · 30s

Q2. Which of the following is a DIRECT source of information about the interior of the earth?

- (A) Seismic waves (B) Meteorites
(C) Volcanic eruptions (D) The magnetic field

PYQ 2019 · CBSE SQP · 1m · 30s

Q3. The point inside the earth where an earthquake's energy is first released is called the:

- (A) Epicentre (B) Focus (hypocentre)
(C) Seismograph (D) Discontinuity

PYQ 2020 · School Annual · 1m · 30s

Q4. The point on the earth's surface directly above the focus of an earthquake is the:

- (A) Epicentre (B) Crater
(C) Moho (D) Vent

PYQ 2022 · School Annual · 1m · 30s

Q5. Which seismic waves are the fastest and the first to be recorded?

- (A) S-waves (B) Surface waves
(C) P-waves (D) L-waves

PYQ 2020 · CBSE SQP · 1m · 30s

Q6. S-waves cannot pass through:

- (A) Solids (B) Liquids
(C) The mantle (D) The crust

PYQ 2022 · CBSE SQP · 1m · 30s

Q7. The complete absence of S-waves beyond about 105 degrees from the epicentre proves that the:

- (A) Crust is thin (B) Mantle is liquid
(C) Outer core is liquid (D) Inner core is gaseous

PYQ 2021 · CBSE SQP · 1m · 45s

Q8. The P-wave shadow zone lies approximately between:

- (A) 0 and 105 degrees (B) 105 and 145 degrees
(C) 145 and 180 degrees (D) Everywhere beyond 105 degrees

PYQ 2023 · CBSE SQP · 1m · 45s

Q9. The boundary between the crust and the mantle is called the:

- (A) Gutenberg discontinuity (B) Lehmann discontinuity
(C) Mohorovicic (Moho) discontinuity (D) Conrad line

PYQ 2019 · CBSE SQP · 1m · 30s

Q10. The soft, plastic layer of the upper mantle, the source of magma, is the:

- (A) Lithosphere (B) Asthenosphere
(C) Outer core (D) SIAL

PYQ 2021 · School Annual · 1m · 30s

Q11. The earth's core is composed mainly of:

- (A) Silica and aluminium
(C) Iron and nickel (NIFE)

- (B) Silica and magnesium
(D) Carbon and oxygen

PYQ 2020 · School Annual · 1m · 30s

Q12. Although it is the hottest region, the inner core is SOLID because of:

- (A) Low temperature
(C) The absence of iron

- (B) Immense pressure
(D) Its plastic nature

PYQ 2022 · School Annual · 1m · 45s

Q13. The lighter, granitic continental crust is dominated by silica and aluminium and is called:

- (A) SIMA
(C) NIFE

- (B) SIAL
(D) Moho

PYQ 2019 · School Annual · 1m · 30s

Q14. Which of the following is an INTRUSIVE volcanic landform?

- (A) Lava flow
(C) Batholith

- (B) Volcanic cone
(D) Lava plateau

PYQ 2023 · CBSE SQP · 1m · 30s

Q15. The vast lava-plateau of the Deccan Traps in India is an example of a(n):

- (A) Intrusive landform
(C) Seismic discontinuity

- (B) Extrusive (volcanic) landform
(D) Epicentre

PYQ 2022 · School Annual · 1m · 30s

ANSWER KEY & EXPLANATIONS

Q 1-15 · MARK YOUR SCORE

Q1. Answer: B

The Kola Superdeep Borehole reached only about 12 km — a tiny fraction of the earth's 6,370 km radius. So the deep interior is known indirectly.

Q2. Answer: C

Volcanic eruptions bring up molten material from depth — a direct sample. Seismic waves, meteorites and the magnetic field are indirect sources.

Q3. Answer: B

The FOCUS (hypocentre) is inside the earth; the EPICENTRE is the point on the surface directly above it.

Q4. Answer: A

The EPICENTRE is on the surface, vertically above the focus; damage is usually greatest here.

Q5. Answer: C

P-waves (Primary) are fastest and arrive first, hence 'Primary'. S-waves arrive second; surface waves arrive last.

Q6. Answer: B

S-waves are transverse and travel only through solids; they cannot pass through liquids — which is how we know the outer core is liquid.

Q7. Answer: C

S-waves cannot cross liquid, so their disappearance beyond 105 degrees proves the OUTER CORE is liquid.

Q8. Answer: B

P-waves are refracted by the core and are missing only in the 105-145 degree band; they reappear beyond 145 degrees. (The S-shadow is everything past 105 degrees.)

Q9. Answer: C

The Mohorovicic (Moho) discontinuity separates crust from mantle. Gutenberg = mantle-core; Lehmann = outer-inner core.

Q10. Answer: B

The asthenosphere is the plastic upper-mantle layer over which plates move and from which magma originates.

Q11. Answer: C

The core (NIFE) is mainly iron and nickel. SIAL (silica-alumina) and SIMA (silica-magnesia) describe the crust.

Q12. Answer: B

The enormous pressure at the centre keeps the inner core solid despite the extreme heat. The outer core is liquid.

Q13. Answer: B

SIAL (silica + aluminium) = lighter continental crust; SIMA (silica + magnesium) = denser oceanic crust.

Q14. Answer: C

A batholith cools below the surface, so it is intrusive. Lava flows, cones and plateaus form at the surface (extrusive).

Q15. Answer: B

The Deccan Traps formed from fluid basaltic lava spreading over the surface — a classic extrusive (volcanic) landform.