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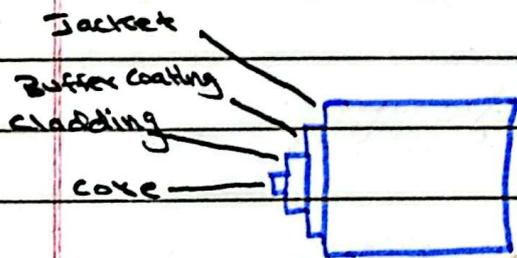
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Explain the mechanism of Fibre optic cable for signal. Explain its construction.

Fibre Optic:

Refers to the technology that transfers data as light signals along a narrow tube of glass or plastic.

Basic Structure of Fibre Optics:



Mechanism of Fibre optic cable:

1-Transmitter circuitry:

Data given in the form of electrical signals is converted into light signals.

2-Role of core and cladding:

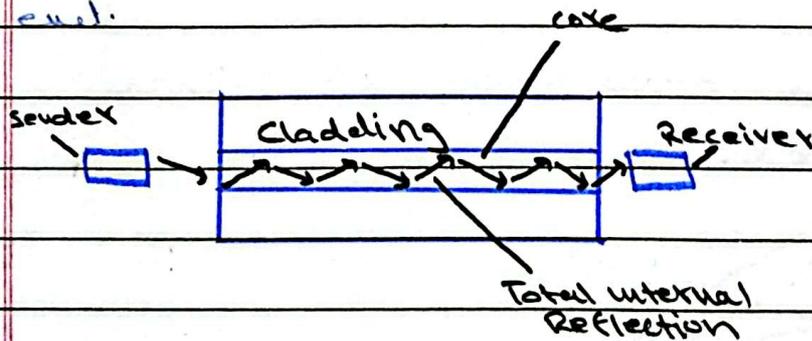
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Signal travels in the core and cladding ensures it stays within it by reflecting light back into it.

3-Receiver circuit:

It converts light back into electrical signals at the receiving end.



Construction of Fibre optic:

1-core:

It is usually made of glass.

2-cladding:

Made of glass or plastic.

3-Buffer coating:

It is made of plastic.

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4-Tacket:

Made of robust plastic such as PVC to ensure protection from abrasion, and damage.

Q: What is an earthquake? Discuss Richter scale in this context. What was the intensity of the earthquake in Pakistan dated 26 October 2015 and where was the locus?

Earthquake:

Sudden release of energy in the form of seismic waves which creates vibrations through the earth crust.

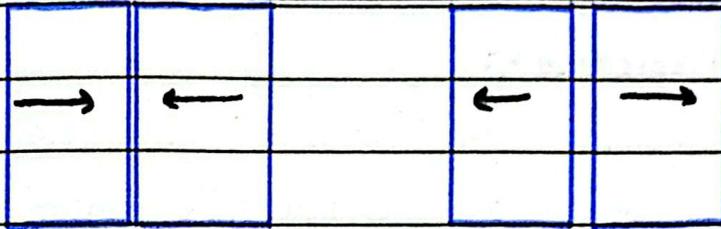
Causes of Earthquake:

1-Movement of Tectonic Plates:

The earth's crust is divided into tectonic plates. seismic waves generate when they collide, pull apart, or slide past each other.

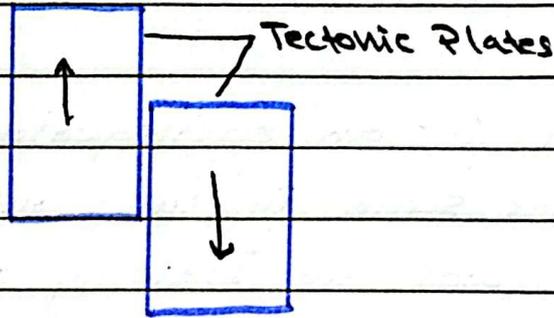
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(convergent boundary)

Divergent boundary



(Transform boundary)

2. Volcanic Activity:

The hot, rising magma cause the surrounding rocks to fracture creating seismic waves.

3. Human Activities:

Heavy drilling, and underground explosions can cause earthquakes.

Richter scale:

It was developed in 1935 by Charles F. Richter to measure the intensity of earthquakes. It uses a seismograph and it is a logarithmic scale: a 6.0 magni-

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hade earthquake is tenfold more powerful than a 5.0 magnitude earthquake.

The Hindukush Earthquake's Intensity:

As per the Pakistan Meteorological Department (PMD) its magnitude was 8.1 on the Richter scale.

Locus of the Earthquake:

It originated in the Hindukush mountain range in Afghanistan and also jolted Pakistan and parts of India.