

CSS-2022

PART-II

(SECTION-A)

Question no. 5:

Answer: Remote Sensing (a)
Remote sensing is the most common way of identifying the physical characteristics of an area by estimating its reflected and discharged radiation at a distance.

Basic Principles of Remote Sensing: Remote sensing works in 2 ways:

1. Active Remote Sensing,
2. Passive Remote Sensing.

(i) Active Remote Sensing: In active remote sensing, radio waves from a satellite are sent to Earth (Figure A). These waves are recorded on Earth by an instrument known as remote sensor.

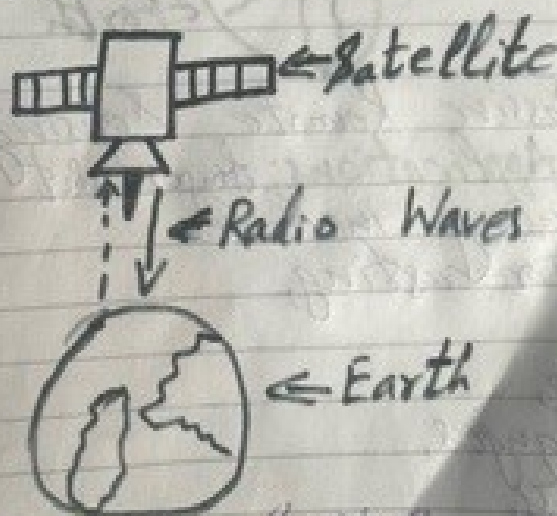


Figure A: Active Remote Sensing

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Passive Remote Sensing: Passive remote sensing depends upon the electromagnetic radiation of the sun. The EM waves reflect from the Earth's surface or move to the environment as intensity waves from the Earth. These waves are recorded on a distant sensor fixed on the satellite. The information achieved from these waves is transformed into digital satellite images. The satellite or airplane on which the sensor is fixed is known as the platform.



Figure B: Passive Remote Sensing
Important Applications: Important applications of remote sensing include:

- * Weather forecasting,
- * Forestry,
- * Agriculture,
- * Surface changes,
- * Biodiversity.