

Reading Comprehension

Passage 3

This sample text has been prepared for the Master of Electrical Engineering entrance exam by Alpha Consulting Group.

Remote sensing refers to obtaining information about objects or areas using electromagnetic radiation without being in direct contact with them. In remote sensing various types of tools and devices are utilized to make electromagnetic radiation outside this range visible to the human eye.

Since the first launch of an earth observation satellite, remote sensing is increasingly used to acquire information about environmental process such as agricultural crops, land cover, vegetation dynamics, water quality, urban growth, seabed topography, etc.

Remote sensing helps us to increase our understanding of the ecological system of the earth. Remote sensing helps us to measure the size of the ozone hole in the atmosphere, to notice the

difference of atmospheric ozone concentrations between the southern and northern hemisphere. Remote sensing is playing a key role in our efforts to understand the complex dynamics of ocean circulation: the Northern Atlantic Oscillation and to assess their effects on global and regional climates and extreme events. long-term remote sensing observations of Sahel region made us at last partly understand the complex cyclic pattern radar that were developed at that time: SLAR: side-looking airborne radar and SAR: Synthetic Aperture Radar.

Either development aimed at the acquisition of images at the highest possible resolution. Crucial to SAR development was the ability to finely resolve the Doppler frequencies using a frequency analysis algorithm on the returning radar signal by the US Air Force research center.

Questions

1. The word "Urban" in the second paragraph means?

- a) Country
- b) Rural area
- c) The area with higher population density
- d) The area surrounding cities

2. "Cyclic patterns" can be replaced by:

- a) Periodic schemes
- b) Plainness diagrams
- c) Motifs which are complex to understand
- d) Patterns which should be studied more extensively

3. According to the passage ,the critical point in designing SAR is:

- a) to be used in remote sensing**
- b) to develop an aperture for the radar**
- c) to combat the effect of Doppler frequency**
- d) to use the Doppler frequency to design a frequency analyzer**

4. According to the passage, what is the purpose of remote sensing?

- a) A method restricted to use radar systems for sensing**
- b) Making electromagnetic radiation visible to human eyes**
- c) Analysis of dynamics of ozone concentration in the atmosphere using radars.**
- d) The use of aerial sensors to detect and classify objects or their alterations which are mostly on earth.**

5. What does the sentence “Either development aimed at the acquisition of images at the highest possible resolution “mean?
- a) Radar systems are required to acquire the picture of a target.
 - b) The goal of both SAR and SLAR is forfeit high resolution pictures.
 - c) The high resolution pictures have an important role in remote sensing.
 - d) The high resolution image of every developed radar system might be captured as a target.

Answers

1==> 4

2==> 1

3==> 3

4==> 2

5==> 4