

(HS103) Ecology and Environment Sciences

Time Duration: Two hours

Maximum Marks: 30

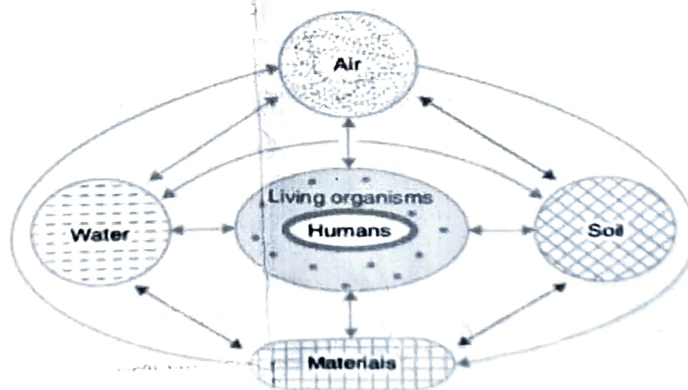
Note:-Attempt All.

Q.1. Answer in True/False to Any 10 of the following and give a very brief justification of your answer. 10

- (a) Cosmic inflation occurred during the Quark Epoch.
- (b) The exosphere is the densest layer of the Earth's atmosphere.
- (c) Bioaccumulation occurs exclusively in aquatic ecosystems.
- (d) The nitrogen cycle is primarily a biological process and does not involve any abiotic components.
- (e) The concept of dark energy was introduced to explain the accelerated expansion of the universe.
- (f) The ionosphere, which is part of the thermosphere, is responsible for reflecting radio waves back to Earth.
- (g) Biomagnification is solely dependent on the toxicity of the substance being magnified.
- (h) The ionosphere, found in the thermosphere, is responsible for the Northern Lights.
- (i) Aerosols are exclusively human-made particles released into the atmosphere.
- (j) Relative humidity is a measure of the actual amount of water vapor in the air compared to the maximum it could hold at that temperature.
- (k) The greenhouse effect is primarily driven by the presence of ozone in the troposphere.
- (l) Indoor air quality is influenced by factors such as ventilation, humidity, and the presence of pollutants.

Q.2. Discuss the consequences of bioaccumulation and biomagnification on ecosystems and human health. Include examples of specific toxins and their effects on different trophic levels. 05

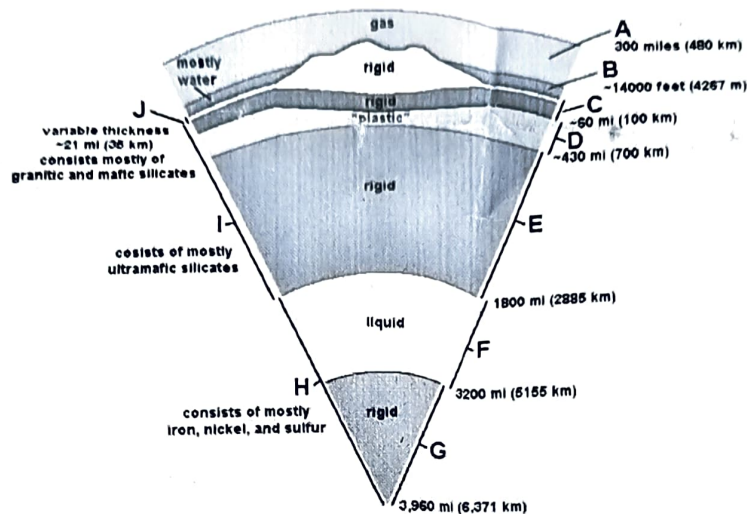
Q.3. Write a note on the interaction among the various components of environment, affecting the life of a human being, represented through following diagram. 05



Q.4. Explain the diagram below, representing the structure of earth and Match letters (A to J) to features on the Structure of the Earth diagram and answer following

05

- Which layer represents Earth's crust?
- Which layer represents the lithosphere?
- Which layer represents the asthenosphere?
- Which layer or layers represent the core?



Q5. Comment on following two statistical analysis related to environmental issues.

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