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INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal-500043, Hyderabad

B.Tech VII SEMESTER END EXAMINATIONS (REGULAR) - FEBRUARY 2022

Regulation: R18

GLOBAL WARMING AND CLIMATE CHANGE

Time: 3 Hours

(CE)

Max Marks: 70

Answer FIVE Questions choosing ONE question from each module
(NOTE: Provision is given to answer TWO questions from any ONE module)

All Questions Carry Equal Marks

All parts of the question must be answered in one place only

MODULE – I

1. (a) What is climate change and global warming? Explain about ozone layer with neat sketch. [7M]
- (b) Explain briefly about the hydrological cycle and water cycle process with neat sketch. [7M]
2. (a) How to measure ozone? Explain bibliographic entry finding research of ozone sphere. [7M]
- (b) What is climate change mitigation? Differentiate between the climate change and mitigation measures in atmosphere. [7M]

MODULE – II

3. (a) Describe the main characteristics of the atmosphere. Explain the atmosphere effects of weather and climate with neat sketch. [7M]
- (b) List the seven layers of atmosphere. How does an inversion layer exacerbate effect air quality? [7M]
4. (a) What is the physical and chemical composition of the atmosphere? Write about the vertical structure of atmosphere in detail with neat sketch. [7M]
- (b) Describe atmospheric constituents of non-changing gases and variable gases with chemical name and percentage in detail. [7M]

MODULE – III

5. (a) Explain causes of climate change and changes of environment in melting of ice pole in detail. [7M]
- (b) Write briefly about impacts of climate changes in ecosystem. Classify the different types of causes of climate change and changes of environment in detail. [7M]
6. (a) What is the irreversible effect of climate change? Briefly explain about sources of uncertainty when applied to climate impacts. [7M]
- (b) Explain briefly effects of human beings for climate change and global warming. List effects of environment for climate change and global warming. [7M]

MODULE – IV

7. (a) What is carbon trading? Explain about different sectors of carbon emission in detail. [7M]
(b) What is the purpose of UNFCCC? Explain about inter governmental panel on climate change in detail. [7M].
8. (a) Is India exempted from Kyoto protocol? Describe in detail about Paris convention. [7M]
(b) What is GCM in climate change? Explain the purpose of GCM and its function in detail. [7M]

MODULE – V

9. (a) Explain about climate change and alternative energy sources of solar energy and hydroelectric power in detail. [7M]
(b) How is hydrogen good for climate change? Distinguish between bioplastics and biodegradable plastics. [7M]
10. (a) Describe about carbon capture storage (CCS) in bio waste and industrial waste. [7M]
(b) What are mitigation technologies? Explain clean development mechanism (CDM) in detail. [7M]

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