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INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal-500043, Hyderabad

B.Tech VII SEMESTER END EXAMINATIONS (REGULAR/SUPPLEMENTARY) - DECEMBER 2022

Regulation: R18

GLOBAL WARMING AND CLIMATE CHANGE

Time: 3 Hours

(CIVIL ENGINEERING)

Max Marks: 70

Answer FIVE Questions choosing ONE question from each module

All Questions Carry Equal Marks

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

MODULE – I

- (a) Outline the effect of global warming on severe weather, like storms, heat waves, droughts and hurricanes. [BL: Understand| CO: 1|Marks: 7]

(b) Explain the process of measuring ozone and describe bibliographic Entry finding research of ozonosphere. [BL: Understand| CO: 1|Marks: 7]
- (a) Determine the chemical formula of ozone reaction in detail. List out the types of ozone layer. [BL: Understand| CO: 1|Marks: 7]

(b) Name the gases which cause ozone depletion. Describe briefly about milestones in remote sensing of terrestrial carbon cycle. [BL: Understand| CO: 1|Marks: 7]

MODULE – II

- (a) Classify the characteristics of atmosphere. Differentiate between the physical and chemical composition of the atmosphere. [BL: Understand| CO: 2|Marks: 7]

(b) Write the causes of atmospheric stability. Explain about the vertical structure of atmosphere in detail with neat sketch. [BL: Understand| CO: 2|Marks: 7]
- (a) What are the seven layers of atmosphere? How does an inversion layer exacerbate affect air quality? Explain. [BL: Understand| CO: 2|Marks: 7]

(b) Why we observe the temperature gradient in the vertical structure of atmosphere? Explain mesosphere atmosphere in detail. [BL: Understand| CO: 2|Marks: 7]

MODULE – III

- (a) Discuss the causes of climate change and changes of environment in melting of ice pole in detail. [BL: Understand| CO: 3|Marks: 7]

(b) How is climate change affecting the polar ice caps? Briefly describe the effects of human beings for climate change and global warming. [BL: Understand| CO: 3|Marks: 7]
- (a) Mention the natural causes of climate change. Explain about uncertainties in the projected impacts of climate change. [BL: Understand| CO: 4|Marks: 7]

(b) Which industry is most affected by climate change? Describe about the projected impacts of climate change in risk of irreversible changes. [BL: Understand| CO: 4|Marks: 7]

MODULE – IV

7. (a) Elucidate about global circulation model. Discuss in detail about purpose of IPCC and its function in detail. [BL: Understand| CO: 5|Marks: 7]
- (b) Write the purpose of UNFCCC and its function. Describe carbon trading and examples of clean technology in climate change. [BL: Understand| CO: 5|Marks: 7]
8. (a) How many countries are in the Paris Convention? Elucidate in detail about climate sensitivity and feedbacks in climate change. [BL: Understand| CO: 5|Marks: 7]
- (b) List the five causes of climate change and observed changes in our earth caused by climate change. Explain about inter governmental panel on climate change in detail. [BL: Understand| CO: 5|Marks: 7]

MODULE – V

9. (a) Is bioplastics a good alternative to plastic? Distinguish between bioplastics and biodegradable plastics. [BL: Understand| CO: 6|Marks: 7]
- (b) Summarize about climate change and alternative energy sources of solar energy and hydroelectric power in detail. [BL: Understand| CO: 6|Marks: 7]
10. (a) What are the benefits of carbon trading? Describe in detail about carbon capture storage (CCS) in industrial waste. [BL: Understand| CO: 6|Marks: 7]
- (b) Discuss how is hydrogen good for climate change? Distinguish between bioplastics and biodegradable plastics. [BL: Understand| CO: 6|Marks: 7]

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