

Term End Examination, 2018
Programme Title: Climate Change and Sustainable Development (CCSD)
Course Title: Introduction to Climate Change and Sustainable Development-Principles and Approaches
Course Code – CCSD - 01

Duration- 3 hours

Total Marks-100

Read the instructions carefully before attempting questions from each group.

GROUP – A

Q.No. 1. Answer all questions selecting the right options. [1 X 10 = 10]

- i) This energy which is radiated in all directions into space through short waves is known as
- Visible light
 - solar radiation
 - X - ray
 - Long wave
- ii) The winter solstice begins from _____ onward the length of day increases in the northern hemisphere till the summer solstice.
- May 22
 - October 22
 - December 22
 - February 22
- iii) When the earth revolves around the sun in an elliptical orbit, it is called as
- movement
 - rotation
 - revolution
 - none of the above
- iv) _____ is one of the ways that energy is transferred from the earth's atmosphere to the air and the process by which heat energy is transmitted through collisions between neighboring molecules
- Conduction
 - Convection
 - Advection
 - Radiation
- v) _____ is the process that accounts for about 19% of insolation. Gases, clouds, dust and haze all absorb certain wavelengths of insolation, which is transformed into molecular motion resulting in a rise in temperature.
- Reflection
 - Scattering
 - Absorption
 - Refraction
- vi) Horizontal distribution of pressure is shown by isobars
- isotherm
 - isobars
 - isohyte
 - isostasy
- vii) Which is not a Form of Precipitation?
- Rain
 - Sunspot
 - Snow
 - Hail

vii) Which is a characteristic of electromagnetic radiation?

- a. Wave length
- b. Radiation
- c. Illumination
- d. Projection

ix) Which is the wave length of visible spectrum?

- a. $.30 \mu\text{m} - .38 \mu\text{m}$
- b. $.4 \mu\text{m} - .7 \mu\text{m}$
- c. $.7 \mu\text{m} - .100 \mu\text{m}$
- d. $1 \mu\text{m} - 30 \text{cm}$

x) Which is not a type of Scattering?

- a. Rayleigh
- b. Mie
- c. selective
- d. Non-selective

GROUP – B

Q.No. 2. Answer any 4 (four) questions each within 50 words. 5 marks each. [5 X 4 = 20]

1. Stratosphere
2. Nitrogen as atmospheric composition of gases
3. Elements and factors of climate
4. Ultra violet radiation
5. Global warming
6. Tornado

GROUP – C

Q.No. 3. Answer any 4 (four) questions each within 200 words. 10 marks each. [10 X 4 = 40]

Explain the following:

1. Inversion of temperature
2. Milankovich Cycle
3. Planetary winds
4. Composition of the atmosphere
5. Heat budget of the earth
6. Concept of Sustainable Development

GROUP – D

Q.No. 4. Answer any 2 (two) questions each within 250 words. 15 marks each. [15 X 2 = 30]

1. Give a brief account of the man made causes of climate change?
 2. Briefly describe the Green House effect?
 3. Discuss the distribution and causes of formation of the pressure belts of the world?
 4. Write down the steps of growth of a tropical cyclone starting from a low pressure centre?
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