

P P SAVANI UNIVERSITY

Third Semester of B. Arch. Examination

September 2021

SAAR2100 Climatology & Environmental Studies - I

29.09.2021, Wednesday Time: 02:00p.m. To 03:30p.m. Maximum Marks: 50

Instructions:

1. Numbers on the right side indicates full marks.
2. Make suitable assumptions and draw neat figures wherever required.

Q-1 Choose the correct answer

[10]

(i) An instrument used to measure relative humidity.

- a) Pyranometer b) Hygrometer c) Anemometer

(ii) Secondary consumers are feed on primary consumers, known as

- a) Herbivores b) Primary carnivores c) Secondary carnivores

(iii) The Ratio of actual amount of moisture present to the amount of moisture air could hold at a given temperature is known as

- a) Relative Humidity b) Absolute Humidity c) Saturation point Humidity

(iv) Main Cause of seasonal change is

- a) Solar radiation b) Structure of Earth c) Tilt of Earth's Axis

(v) Buildings should be spread out with large open spaces in between for uninterrupted air movement in

- a) Hot & Dry b) Warm & Humid c) Composite

(vi) The Comfort Chart is a tool that helps operators determine how well air-handling equipment is providing

- a) Thermal comfort b) Temperature comfort c) Humidity comfort

(vii) The Collective term used for Rain, snow, Hail, dew & frost is known as

- a) Driving rain b) Rainfall c) Precipitation

(viii) They are in exhaustive and can be regenerated in a given span of time.

- a) Renewable Resources b) Non-Renewable Resources c) Fossil fuels

(ix) The number and variety of plants, animals and other organisms that exist in an ecosystem is known as

- a) Natural ecosystem b) Biodiversity c) Ecology

(x) Condition of the atmosphere over a short period of time known as

- a) Climate b) Weather c) Season

Q-2 True or False

[10]

- (i) Good Biodiversity is a key to healthy ecosystem.
- (ii) Weather is the condition of the atmosphere over a long period of time.
- (iii) Atmospheric pressure is commonly measured with a barometer.
- (iv) Kerala has Hot and Dry type of climate.
- (v) Relative humidity is the ratio of Absolute humidity to saturation point humidity.
- (vi) Animals cannot synthesis their food directly but depend on the plants either directly or indirectly.
- (vii) Tropical countries have warm weather as the dominant problem.
- (viii) One should plant exotic imported species of plants and trees instead of local varieties.
- (ix) Earth absorbs all the heat that gets through solar radiation.
- (x) Encouraging non-motorized vehicles or electricity driven vehicles can result in lowering of air pollution.

Q – 3 Write short notes. (Any 2)

[20]

- (i) Enlist and explain different elements of climate.
- (ii) What is Biodiversity? What causes loss of biodiversity also discuss Biodiversity conservation.
- (iii) Enlist major natural resources. Discuss causes and consequences of Deforestation.

Q – 4 Write short notes on following (Any 3)

[15]

- (i) Role of Ozone Layer and consequences of ozone layer depletion.
- (ii) Role of an architect in ecological conservation.

(iii) Body heat exchange effect.

(iv) Sustainable utilization of resources.

Q – 5 Enlist major climatic zones in India. Discuss the Warm and Humid ,
Composite climate in detail with Example & sketches. [15]

OR

Q –5 Enlist major climatic zones in India. Discuss the Hot and Dry, Cold and Sunny
climate in detail with Example & sketches. [15]

Q –6 Explain in detail with suitable examples and sketches (Any 3) [30]

(i) Enlist classification of Climatic zones at Global level. Explain Architectural considerations for buildings in “Tropical Zone” with example and sketches.

(ii) How is the climate data organized so as to make comprehensible for the architect or the designer?

(iii) Discuss the causes behind fast paced urbanization, and the undesirable outcomes of the same.

(iv) Enlist types of natural eco systems & explain any one in detail.