

University Mohamed KHIDER

Biskra, 23/05/2024

Faculty of Exact Sciences and Natural Sciences

Department of Agronomy

**Exam: Climatology: 1st year engineering**

**Name**

**Surname**

**Group:**

**Questions 1: True or False Answer**

1. The aim of climatology is to analyze meteorological elements on instantaneous values (pressure, temperature, rain.) which constitute the climate. T
2. Factors like altitude and latitudes, vegetation are considered climate factors. T
3. Cloudiness is the percentage of sky coverage by water vapor evaluated according to an arbitrary scale of 0 to 8 octas. F
4. The temperature in the troposphere decreases every 100 meters by  $0.65^{\circ}\text{C}$  T
5. In the stratopause the temperature is close to  $0^{\circ}\text{C}$  T
6. Tropical air masses are warm and humid if they come from the continents F
7. Areas of high pressure in the earth are found in the poles and tropics
8. Among the causes of the circulation of air masses is solar radiation T
9. The rotation of the earth deflects winds to the right in the northern hemisphere and to the left in the southern hemisphere. T
10. A plant cover is characterized by exchange surfaces (the root and leaf interface) and albedo F

- 11. The leaf interface is the accumulation over the height (zh) of all leaf surfaces over the soil depth: m<sup>2</sup>/m<sup>2</sup>. F
- 12. Crop evapotranspiration (ETP) is the evapotranspiration of a given crop, at a given vegetative stage and under given climatic conditions F
- 13. The Kc coefficient is called variable cultural coefficient depending on the crops and vegetative stages T
- 14. The thermal tolerance threshold for most species is between +50° C and +10° C F
- 15. Thermo periodicity is plants sensitivity to light fluctuations between day and night. F
- 16. The wind has not the power to cause plants to modify the shape of plants F

**Questions 2 : Answer the following questions 0,5pts**

- 1. Hygrophytic plants .....
- Heliophytic.....
- 2. - Name the device used for measuring precipitation, and radiation.....
- 3. The main meteorological parameters estimated elements are: .....
- 4. The main meteorological parameters observed on the surface are: .....
- 5. To classify the climate in bioclimatic stages it is necessary to calculate.....
- 6. To characterize the dry period it is necessary to: .....
- The Martonne index is : .....

## Corrigé type

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**Questions 2 : Answer the following questions 0,5pts**

1. Hygrophytic plants Very demanding in water , Heliophytic Plants" shade species
2. Name the device for measuring precipitation, precipitation and radiation **Pluviometer The heliograph**
3. The main meteorological parameters estimated elements: **cloudiness, visibility**
4. The main meteorological parameters observed on the surface are:

**Atmospheric pressure, wind, precipitation, air temperature under shelter**

**diagram**

5. to classify the climate in bioclimatic stages it is necessary to calculate **the Emberger quotient  $Q = 2000P/M2-m2,$**
6. To characterize the dry period: the Gaussen ombrothermic
7. the Martonne aridity index: classifying the climate according to aridity

