
College of Agriculture, Fisheries & Forestry
School of Agricultural Sciences
Department of Crop Production
Bachelor of Science in Agriculture
AGM 501 (Principles of Agricultural Meteorology)

Trimester III Final Examination - 2016 Total Marks: 100
Duration: Three Hours

INSTRUCTIONS TO STUDENTS

1. This paper consists for 5 pages. Please check to see that your paper is complete.
2. You are allowed 10 minutes extra reading time in which you are NOT permitted to write.
3. Attach all the sheets used as your answer paper in their correct sequence and secure with a string.
4. Use both sides of the answer sheet and write your candidate number on each sheet.
5. Write clearly the number(s) of the question(s) attempted on the top of each sheet.

SECTION	PARTICULARS	TOTAL MARKS	THE ALLOCATIONS
A	Part 1: Multiple Choices Part 2: Fill in the Blanks Part 3: True and False	20	30 minutes
B	Short answers	10	60 minutes
C	Long answers	20	90 minutes
	Total	50	3 Hours

SECTION –A

There are three parts in this section. All the questions are compulsory. In your answer booklet write the question number followed by the answer.

Part 1: Multiple Choice Questions. Pick the correct answer.

(10×1=10 Marks)

(1) Fiji Meteorological Service headquarter is in _____

- a. Nadi
- b. Suva
- c. Ba
- d. None of these

(2) Most of the internal variability of climate in the tropics and a substantial part of mid-latitudes is related to _____

- a. La-Niño
- b. El Niño/Southern Oscillation
- c. Evaporation
- d. None of these

(3) _____ refers to variability observed in the climate record in periods when the state of the climate system is not showing changes.

- a. Climate variability
- b. Weather Correlation
- c. Climate weather ratio
- d. Vapor content

(4) Precipitation in the form of water drops of size larger than 0.5 mm to 6 mm is _____

- a. Dew
- b. Rain
- c. Glaze
- d. None of these

(5) Combined loss of water vapor from transpiration and evaporation is _____

- a. Transpiration
- b. Evapotranspiration
- c. Evaporation
- d. None of these

(6) ET that occurs from a well vegetated surface when moisture supply is not limiting _____

- a. Transpiration
- b. Evapotranspiration
- c. Evaporation
- d. PET

(7) When the isobars are circular or elliptical in shape, and the pressure is highest at the center, such a pressure system is called _____

- a. Anti-cyclone
- b. Cyclone
- c. Trough
- d. Storm

(8) Collection and interpretation of information about a target without being in physical contact with it is _____

- a. Climate change
- b. Remote sensing
- c. Remote changing
- d. Remote guessing

(9) _____ refers to the direction a wind comes from.

- a. Windward
- b. Leeward
- c. Seaward
- d. Howard

(10) The term _____ is applied to investigations of regional weather and circulation types.

- a. Meteorology
- b. Agro meteorology
- c. Climatology
- d. Synoptic climatology

Part 2: Fill in the blanks.

(10×0.5 = 5 Marks)

- (1) CO₂ contributes most.....to the anthropogenic greenhouse effect.
- (2)is the interdisciplinary scientific study of the atmosphere.
- (3) The study of Earth's atmosphere and its processes is called.....
- (4) The atmosphere has a mass of about kg.
- (5) The weather averaged over a long period known as
- (6) layer of atmosphere is called as "Seat of weather phenomena".
- (7) Fiji enjoys aclimate with heavy rain under prevailing conditions.
- (8) The average height of this lower most layer of the atmosphere is about kilometers.
- (9)is a state or condition of the atmosphere at a given place and at a given instant of time.
- (10) The energy transmission through space from the sun to the earth through.....

Part 3: Mark true or false

(10×0.5 =5 Marks)

- (1) There is definite upper layer to the atmosphere. (True/False)
- (2) Sulfur dioxide (SO₂) and nitrogen compounds are some of the major air pollutants emitted by industrial and domestic sources. (True/False)
- (3) Agrometeorology is study of climatic factors in related to agriculture. (True/False)
- (4) The part of the spectrum which is invisible known as 'light'. (True/False)
- (5) "Cal/cm² "is also known as "Hangley". (True/False)
- (6) Black body is an ideal hypothetical body which absorbs all the electromagnetic radiation falling on it. (True/False)
- (7) Albedo is defined as the ratio between reflected radiation and incident radiation on a crop field, snow, leaves. (True/False)
- (8) The atmosphere absorbs about 50 percent of the solar radiation. (True/False)
- (9) There are four points of temperature which influence the growth of crop plants termed as "cardinal points". (True/False)
- (10) Freezing damage is caused by the formation of ice crystals in the intracellular spaces and extracellular spaces. (True/False)

SECTION- B (Short answers questions)

(5×2 = 10 Marks)

Answer all the questions. Each question carries 2 marks.

1. Enlist different factors affecting transpiration?
2. What are cardinal temperatures? Explain with suitable example.
3. What are different functions of light?
4. What is climate smart agriculture?
5. What do you understand by water harvesting? Discuss its advantages.

Section-C (Long answer questions)

(4×5=20 Marks)

Answer only **four** from the following questions. **Each question carries 5 marks.**

1. Fiji is vulnerable to climate change. Discuss it in detail.
2. Enlist major differences between weather and climate.
3. Draw a neat layout of instruments in agro meteorological observatory.
4. What is weather forecasting? Discuss utility of weather forecasts in agriculture?
5. Define Agricultural Meteorology. Discuss its significance in agriculture.
6. Discuss different pressure systems in detail. Support your answer with neat diagram.

THE END