



COLLEGE OF AGRICULTURE, FISHRIES AND FORESTRY (CAFF)

B.Sc.in Agriculture I Year

AGM-501 (Principles of Agricultural Meteorology)

Date of Examination:

Time:

FINAL EXAM TRIMESTER- 1, 2014

DURATION 3 HOURS

INSTRUCTIONS TO STUDENTS

1. You are allowed 10 minutes extra reading time in which you are NOT permitted to write.
2. Attach all the sheets used as your answer paper in their correct sequence and secure with a string.
3. Use both sides of the answer sheet and write your candidate number on each sheet.
4. 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 Choice Questions Part 2: Fill in the Blanks Part 3: True and False	35	30 minutes
B	Short answers	35	60 minutes
C	Long answers	30	90 minutes
	Total	100	

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.

(1.5×10=15 Marks)

- (1) An aggregation of minute drops of water suspended in the air at higher altitudes is _____
 - a. Rainfall
 - b. Cloud
 - c. Dew
 - d. None of these

- (2) 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

- (3) The dampness (wetness) of air is called
 - a. Acidity
 - b. Acid rain
 - c. Humidity
 - d. Vapor content

- (4) A physical process in which liquid water is converted into its vapor is _____
 - a. Transpiration
 - b. Evapotranspiration
 - c. Evaporation
 - 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 lowest at the center, such a pressure system is called _____
 - a. Anti-cyclone
 - b. Cyclone
 - c. Trough
 - d. Strom

(8) RSMC-tropical Cyclone Centre is situated at ____ in Fiji.

- a. Sigatoka
- b. Nadi
- c. Suva
- d. Nausori

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

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

(10) A branch of physics of the earth dealing with physical processes in the atmosphere that produce weather_____

- a. Meteorology
- b. Agro meteorology
- c. Climatology
- d. None of these

Part 2: Fill in the blanks.

(10×1 = 10 Marks)

- (1)is the interdisciplinary scientific study of the atmosphere.
- (2) The study of Earth's atmosphere and its processes is called.....
- (3) The atmosphere has a mass of about kg.
- (4) The weather averaged over a long period known as
- (5) layer of atmosphere is called as “Seat of weather phenomena”.
- (6) Fiji enjoys aclimate with heavy rain under prevailing conditions.
- (7) The average height of this lower most layer of the atmosphere is about kilometers.
- (8) CO₂ contributes most.....to the anthropogenic greenhouse effect.
- (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.

(1×10 =10 Marks)

- (1) There is no definite upper layer to the atmosphere. (True/False)
- (2) Convection is the process of transmission of heat through actual movement of molecules of the medium. (True/False)
- (3) Agrometeorology is study of climatic factors in related to agriculture. (True/False)
- (4) The part of the spectrum which is visible known as `light'. (True/False)
- (5) "Cal/cm² “is also known as "Langley". (True/False)

(6) Black body is an ideal hypothetical body which absorbs none of the electromagnetic radiation falling on it. (True/False)

(7) Albedo is defined as the ratio between incident radiation to the reflected radiation on a crop field, snow, leaves. (True/False)

(8) The atmosphere absorbs about 20 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) (5×7 = 35 Marks)

Answer all the questions. Each question carries 7 marks.

1. Enlist environmental factors affecting transpiration?
2. What are cardinal temperatures? Explain with suitable example.
3. What are different functions of light?
4. Define solar constant. What is its unit?
5. Define albedo. Support your answer with suitable example.

Section-C (Long answers) (3×10=30 Marks)

Answer only **three** from the following questions. Answer each in 300 words. **Each question carries 10 marks.**

1. Write an essay on the injuries caused by low air temperature in plants.
2. Differentiate between cyclone and anticyclones in detail.
3. Define Agricultural Meteorology. Discuss its significance in agriculture.
4. Enlist major differences between weather and climate.
5. Draw a neat layout of instruments in agro meteorological observatory.
6. What is weather forecasting? Discuss utility of weather forecasts?

THE END

