



COLLEGE OF AGRICULTURE, FISHERIES AND FORESTRY (CAFF)

Trade Diploma in Agriculture II Year

AMC-501 (Agro-meteorology and Climate Change)

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	40	40 minutes
B	Short answers	30	50 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.

(2×10=20 Marks)

- (1) RSMC-tropical Cyclone Centre is situated at ____ in Fiji.
 - a. Sigatoka
 - b. Nadi
 - c. Suva
 - d. Nausori

- (2) Combined loss of water vapor from transpiration and evaporation is ____
 - a. Transpiration
 - b. Evapotranspiration
 - c. Evaporation
 - 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) ____ refers to the direction a wind comes from.
 - a. Windward
 - b. Leeward
 - c. Seaward
 - d. Howard

- (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) An aggregation of minute drops of water suspended in the air at higher altitudes is _____
- Rainfall
 - Cloud
 - Dew
 - None of these

- (9) Precipitation in the form of water drops of size larger than 0.5 mm to 6 mm is _____
- Dew
 - Rain
 - Glaze
 - None of these

- (10) A branch of physics of the earth dealing with physical processes in the atmosphere that produce weather _____
- Meteorology
 - Agro meteorology
 - Climatology
 - None of these

Part 2: Fill in the blanks.

(10×1 = 10 Marks)

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

Part 3: MARK TRUE OR FALSE.

(1×10 =10 Marks)

- Agrometerology is study of climatic factors in related to agriculture. (True/False)
- Convection is the process of transmission of heat through actual movement of molecules of the medium. (True/False)
- There is no definite upper layer to the atmosphere. (True/False)
- The part of the spectrum which is visible known as `light'. (True/False)
- "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) Freezing damage is caused by the formation of ice crystals in the intracellular spaces and extracellular spaces. (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) Albedo is defined as the ratio between incident radiation to the reflected radiation on a crop field, snow, leaves. (True/False)

SECTION- B (Short Answers) (5×6 = 30 Marks)

Answer all the questions. Each question carries 6 marks.

1. Define transpiration. Enlist environmental factors affecting transpiration?
2. What are cardinal temperatures? Explain with suitable example.
3. Enlist different functions of light?
4. Define solar constant. What is its unit?
5. What is albedo? What is the value of albedo cropped field and dark cultivated soil?

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. Differentiate between cyclone and anticyclones in detail.
2. Define Agricultural Meteorology. Discuss its significance in agriculture.
3. Enlist major differences between weather and climate.
4. Write an essay on global warming.
5. Write an essay on climate of Fiji.

THE END