

Course outline

How does an NPTEL online course work?

Week 0 :

Week 1:

Week 2:

Week 3 :

Week 4 :

Lecture 16 : LAI Applications: Phenology, Climate and LSMs

Lecture 17 : RS of Primary Productivity - Uncertainties and Challenges - LUE

Lecture 18 : LAI Applications: Indian Examples

Lecture 19 : Primary Productivity Applications: Indian Examples

Lecture 20 : Primary Productivity Applications: Indian Examples and Way Forward

Week 4 Lecture Material

Quiz: Week 4 : Assignment 4

Week 4 Feedback Form

[Assignment Solution](#)

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Week 4 : Assignment 4

The due date for submitting this assignment has passed.

Due on 2021-09-01, 23:59 IST.

As per our records you have not submitted this assignment.

1) LAI is useful for derivation of the distinctive phenological features

1 point

- a. True
 b. False

No, the answer is incorrect.
Score: 0

Accepted Answers:
a. True

2) The increase in Global LAI since 1850 is not consistent with change in temperature

1 point

- a. True
 b. False

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. False

3) LAI acts as the bridge to upscale the rate of leaf biophysical and biogeochemical processes

1 point

- a. True
 b. False

No, the answer is incorrect.
Score: 0

Accepted Answers:
a. True

4) The Tropical forests demonstrate less uncertainty in estimate of primary production

1 point

- a. True
 b. False

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. False

5) The canopy photosynthesis relationships do not vary with environmental variables and vegetation types

1 point

- a. True
 b. False

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. False

6) Litter fall serves as a good indirect measurement for LAI Estimate

1 point

- a. True
 b. False

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. False

7) ESU denotes to 'Elementary Sampling Unit'.

1 point

- a. True
 b. False

No, the answer is incorrect.
Score: 0

Accepted Answers:
a. True

8) The aboveground biomass/ carbon estimates demonstrated low correlation with humidity and air temperature for tropical deciduous forest

1 point

- a. True
 b. False

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. False

9) Utilisation of multisensor satellite data along with machine learning approaches have shown synergy in estimating the aboveground biomass/ carbon

1 point

- a. True
 b. False

No, the answer is incorrect.
Score: 0

Accepted Answers:
a. True

10) Effective integration of field observations, collected through various monitoring networks, and satellite sensor data provide country-wide monitoring

1 point

- a. True
 b. False

No, the answer is incorrect.
Score: 0

Accepted Answers:
a. True

11) The key issues in the retrieval of winter LAI from high altitude forests with snow background are _____.

1 point

- a. Large Solar Zenith Angle
 b. Weak Remote Sensing Signals
 c. None of the Above
 d. All of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
d. All of the above

12) The climate change feedback of LAI _____

1 point

- a. Increase in Albedo for snow free regions
 b. Decrease in canopy evapotranspiration
 c. Increase in Atmospheric Temperature for snow free regions
 d. None of the Above

No, the answer is incorrect.
Score: 0

Accepted Answers:
c. Increase in Atmospheric Temperature for snow free regions

13) The ratio of Photosynthetically Active Radiation (PAR) to Solar Radiation varies between 0.41 and 0.53 with _____.

1 point

- a. Altitude
 b. Water Vapour
 c. Zenith Angle
 d. All of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
d. All of the above

14) The LAI products of past four decades have shown inconsistencies over time in their correct _____.

1 point

- a. Tends across Products
 b. Magnitudes
 c. Inter-annual variations
 d. All of the Above

No, the answer is incorrect.
Score: 0

Accepted Answers:
d. All of the Above

15) _____ of the following statement is correct.

1 point

- a. The soil moisture information obtained from microwave satellite data better characterizes the root zone moisture
 b. The C4 plants account to approximately 25% of global photosynthesis
 c. The photosynthesis mechanism of C4 plants are same with C3 Plants
 d. Accounting of surface moisture is more important than root zone moisture for primary production estimate

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. The C4 plants account to approximately 25% of global photosynthesis

16) A Tropical deciduous forest does not have _____ .

1 point

- a. Regular stem density
 b. Varied Phenophases
 c. Multi-storied canopy architecture
 d. High species richness

No, the answer is incorrect.
Score: 0

Accepted Answers:
a. Regular stem density

17) Which among the following does serve as a proxy for LAI estimation?

1 point

- a. DBH- Diameter at Breast Height
 b. Tree height
 c. Tree density
 d. All of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
d. All of the above

18) Which of the following does provide information about vertical structure of vegetation?

1 point

- a. Microwave data
 b. LiDAR data
 c. UAV data
 d. None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. LiDAR data

19) Production efficiency models consider _____ to estimate primary production

1 point

- a. light use efficiency
 b. Water stress
 c. Temperature stress
 d. All of the Above

No, the answer is incorrect.
Score: 0

Accepted Answers:
d. All of the Above

20) Biogeochemical models of primary production estimates _____.

1 point

- a. are comprehensive
 b. are spatial
 c. do integrate climate and nutrient parameters
 d. All of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
d. All of the above