

Course outline

How does an NPTEL online course work?

Week 0 :

Week 1:

Week 2:

- Lecture 6 : LAI- Optical RS Methods: Empirical Transfer Functions
- Lecture 7 : LAI Estimation- RS Methods: Model Inversion
- Lecture 8 : LAI Estimation- LIDAR and Microwave RS Methods
- Lecture 9 : LAI- Global Data Products
- Lecture 10 : LAI Products- Challenges and Future Prospects
- Week 2 Lecture Material
- Quiz: Week 2 : Assignment 2
- Feedback Form for Week 2

Week 3 :

Week 4 :

[Assignment Solution](#)

[Download Videos](#)

[Live Interactive Session](#)

Week 2 : Assignment 2

The due date for submitting this assignment has passed.

Due on 2021-08-18, 23:59 IST.

As per our records you have not submitted this assignment.

State True or False

1) Vegetation Indices are usually formulated using 2-3 bands

- a. True
 b. False

No, the answer is incorrect.
Score: 0

Accepted Answers:
a. True

1 point

2) Single band based empirical relationship is not sensitive to atmospheric and background setting

- a. True
 b. False

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. False

1 point

3) Most two-band vegetation indices have small difference between NIR and Red reflectance for leaves in contrast to soil background.

- a. True
 b. False

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. False

1 point

4) Leaf reflectance and transmittance spectra differ among land cover types

- a. True
 b. False

No, the answer is incorrect.
Score: 0

Accepted Answers:
a. True

1 point

5) Radiative Transfer Models (RTMs) are computationally inefficient and unreliable

- a. True
 b. False

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. False

1 point

6) LUT relates multispectral reflectance to LAI using solar and observation parameters

- a. True
 b. False

No, the answer is incorrect.
Score: 0

Accepted Answers:
a. True

1 point

7) Microwave radar data overcomes the limitations of optical remote sensing by providing data continuity during cloudy days

- a. True
 b. False

No, the answer is incorrect.
Score: 0

Accepted Answers:
a. True

1 point

8) A Biome map uses standard constants for leaf, wood, litter and soil optical properties, those vary within each Biome

- a. True
 b. False

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. False

1 point

9) There is no hectometric LAI Product within 250-500m range

- a. True
 b. False

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. False

1 point

10) Primary Production is better related to LAI surrogate during the growing season

- a. True
 b. False

No, the answer is incorrect.
Score: 0

Accepted Answers:
a. True

1 point

Fill in the Blanks

11) Green Leaf has reflectance and transmittance _____.

- a. Low in Red and Blue due to strong chlorophyll absorption
 b. High in NIR due to leaf internal cell structure
 c. Low in SWIR due to absorption by liquid water
 d. All of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
d. All of the above

1 point

12) Ray Tracing Models simulate the amount of radiation _____ from the canopy

- a. Emitted
 b. Reflected
 c. Transmitted
 d. None of the Above

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. Reflected

1 point

13) Radiosity models treat each leaf as a separate entity submerged in _____ field.

- a. Electromagnetic
 b. Gravitational
 c. Radiation
 d. None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
c. Radiation

1 point

14) The correct sequence of resolution of Laser Scanner data are _____.

- a. ALS>SLS>TLS
 b. TLS>ALS>SLS
 c. TLS>SLS>ALS
 d. SLS>TLS>ALS

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. TLS>ALS>SLS

1 point

15) LAI estimation from LIDAR is usually based on correlation with _____.

- a. Background Soil
 b. Canopy Gap Fraction
 c. Chlorophyll absorption
 d. Absorption by liquid water

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. Canopy Gap Fraction

1 point

16) Unmanned Aerial Vehicles (UAVs) based LAI measurement act as validation link between _____ and Satellite data

- a. Field
 b. Lab
 c. Model
 d. None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
a. Field

1 point

17) Differences in the LAI products are attributed to _____.

- a. Input Reflectance
 b. Algorithm Retrieval
 c. Clumping Effect Processing
 d. All of the Above

No, the answer is incorrect.
Score: 0

Accepted Answers:
d. All of the Above

1 point

18) CYCLOPES LAI products are based on _____ data.

- a. SPOT/VEGETATION
 b. MODIS
 c. EnvisAT/MERIS
 d. PROBA-V

No, the answer is incorrect.
Score: 0

Accepted Answers:
a. SPOT/VEGETATION

1 point

19) MODIS 5 and 6 LAI products are _____ to maintain the integrity of the original data

- a. Gap-filled and Seasonally Smoothed
 b. Not Gap-filled and Seasonally Smoothed
 c. Gap-filled and not Seasonally Smoothed
 d. None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. Not Gap-filled and Seasonally Smoothed

1 point

20) Which of the following is a key issue in LAI estimation and mapping using remote sensing?

- a. Retrieval of Winter LAI for High-Latitude Forests with Snow Background
 b. Separation of Overstorey and Understorey LAI in forests
 c. Seasonal Variations of CI for different Vegetation Types
 d. All of the Above

No, the answer is incorrect.
Score: 0

Accepted Answers:
d. All of the Above

1 point