Unit 3 - Week 1: Introduction to Solar Energy

Assignment 1

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2020-09-30, 23:59 IST.

1) Which of the following form of energy is depicted as high grade energy? *1 point*

- a. Mechanical
- b. Thermal
- c. Electrical
- d. All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
c. Electrical

2) A 500 kW rated power plant running at its full capacity would generate _____ kWh of electricity per year (365 days). *1 point*

- a. 4,380
- b. 8,760,000
- c. 4,380,000
- d. 8,760

No, the answer is incorrect.
Score: 0
Accepted Answers:
c. 4,380,000

3) The first law of thermodynamics is *1 point*

- a. Internal energy = heat added into work done
- b. Internal Energy = Heat rejected into work done
- c. Internal Energy = Heat added divided by work done
- d. Internal Energy = Heat added plus work done

No, the answer is incorrect.
Score: 0
Accepted Answers:
d. Internal Energy = Heat added plus work done

4) The amount of electricity consumed by a 50 Watts bulb for 8 hours is *1 point*

- a. 0.1 kWh
- b. 0.5 kWh
- c. 0.4 kWh
- d. 1.0 kWh

No, the answer is incorrect.
Score: 0
Accepted Answers:
c. 0.4 kWh

5) The example of indirect method of solar energy utilization is *1 point*

- a. Wind energy
- b. Biomass energy
- c. Wave energy
- d. All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
d. All of the above

6) Which of the following solar device delivers maximum collector efficiency at STC? *1 point*

- a. Flat plate collector
- b. Evacuated tube collector
- c. Line focusing collector
- d. Paraboloid dish collector

No, the answer is incorrect.
Score: 0
Accepted Answers:
d. Paraboloid dish collector

7) When the sun is at its zenith,the value of optical air mass is *1 point*

- a. Zero
- b. Unity
- c. Two
- d. Three

No, the answer is incorrect.
Score: 0
Accepted Answers:
b. Unity

8) The value of solar constant (watts per square meter) in the extraterrestrial region is *1 point*

- a. 1367
- b. 1267
- c. 1167
- d. 1000

No, the answer is incorrect.
Score: 0
Accepted Answers:
a. 1367

9) Absorption of solar radiations at earth's surface occurs due to presence of *1 point*

- a. Ozone
- b. Water vapors
- c. Carbon dioxide
- d. All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
d. All of the above

10) The solar radiation falls at the Earth's surface includes: *1 point*

1. Direct radiation that has passed through the atmosphere
2. Diffuse radiation from the sky
3. Absorbed radiation from the water

Select the correct answer using the code given below:

- a. 1 only
- b. 1 and 2
- c. 1, 2 and 3
- d. 2 and 3

No, the answer is incorrect.
Score: 0
Accepted Answers:
b. 1 and 2

11) The portion of the radiation spectrum emitted by the sun in the wavelength between 0.4 μm and 0.7 μm is called *1 point*

- a. Ultra violet radiation
- b. Visible radiation
- c. Infrared radiation
- d. None of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
b. Visible radiation

12) The sun subtends an angle of _____ (degree) at the earth's surface. *1 point*

- a. 0.53°
- b. 23.5°
- c. 32.5°
- d. 46.5°

No, the answer is incorrect.
Score: 0
Accepted Answers:
a. 0.53°

13) Solar collector efficiency is defined as *1 point*

- a. Useful heat gain to the product of solar flux received and area of the collector
- b. Product of solar flux received and area to the useful heat gain
- c. Useful heat gain to the solar flux received
- d. Useful heat gain to area of the collector

No, the answer is incorrect.
Score: 0
Accepted Answers:
a. Useful heat gain to the product of solar flux received and area of the collector