

Unit 3 - Week 1

Course outline

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Pre-requisite Assignment

Week 1

- Lesson 1, Introduction
- Lesson 2, Origin of Life
- Lesson 3, Evolution
- Lesson 4, Cells
- Lesson 5, Biomolecules - Lipids
- Quiz : Assignment 1

Week 2

Week 3

Week 4

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Assignment 1

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

Due on 2019-08-14, 23:59 IST.

1) Following are some true/false statements about bio-mimicry: 1 point

- A. The nose design of the high-speed Shinkansen electric train is based on the shape of the kingfisher's beak.
 B. Velcro is a company that created and produces a first commercial hook and loop fasteners which are inspiration from cat feet.
 C. The black wings of the rose butterfly have inspired the design of a more efficient wind mill

Which of the following choices is valid?

- B and C
- A and B
- A alone
- B alone

No, the answer is incorrect.
Score: 0

Accepted Answers:
A alone

2) Which of the following cells can be cultured via a bioreactor to produce bio product? 1 point

- Mammalian cells
- Fungi
- Bacteria
- Yeast

No, the answer is incorrect.
Score: 0

Accepted Answers:
Mammalian cells
Fungi
Bacteria
Yeast

3) Complete the following sentence using the options given below the sentence as A, B, C, D and E. 1 point

Plant cells have a _____; therefore, they are _____ to shear stress.

- A. Cell membrane
 B. More sensitive
 C. Cell wall
 D. Less sensitive

- A, D
- A, B
- C, D
- A, C

No, the answer is incorrect.
Score: 0

Accepted Answers:
C, D

4) The following table lists the type of lipid with its chemical composition. Select the most accurate combination. 1 point

Lipid	Chemical Composition
A. Phospholipid	Triacylglycerol
B. Glycolipid	Lipid + Sugar
C. Cholesterol	Alcohol + Steroid

- All of these
- C only
- A only
- B, C

No, the answer is incorrect.
Score: 0

Accepted Answers:
B, C

5) Which of the following is the best way to sterilize heat sensitive solutions like antibiotic and growth hormones solution 1 point

- Dry heat
- Autoclave
- Passing through a 0.22 μm filter
- All of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
Passing through a 0.22 μm filter

6) Harold Urey and Stanley Miller experimentally proved 1 point

- The earth is billion years old.
- Spontaneous synthesis of small organic molecule from existing molecule
- Both (a) and (b)
- None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
Spontaneous synthesis of small organic molecule from existing molecule

7) Which molecule might have been the earliest genetic material? 1 point

- DNA
- RNA
- Protein
- All of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
RNA

8) An example of abiotic synthesis is: 1 point

- Joining of two organic monomers to form a polymer
- Separation of polymers to form monomer
- Synthesis of simple organic molecule in early earth environment
- None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
Synthesis of simple organic molecule in early earth environment

9) Select the correct statement. 1 point

- The early earth had oxidizing environment
- The early earth was covered with snow when it was formed
- There was no presence of oxygen in the early earth atmosphere
- Bacteria was the first living organism evolved in the early earth's atmosphere

No, the answer is incorrect.
Score: 0

Accepted Answers:
There was no presence of oxygen in the early earth atmosphere

10) Phenotypes are 1 point

- Physical appearance
- Genetic make up
- Metabolic feature
- All of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
Physical appearance