

Unit 14 - Week 12: Chemistry of carbohydrates and Recap

Course outline

How does an NPTEL online course work?

Week 0: Prerequisite

Week 1: Nucleic acids and proteins

Week 2: Nucleic acids and proteins

Week 3 : Synthesis of Nucleobases and Nucleotides

Week 4 : DNA Replication, Polymerases, DNA Sequencing and PCR

Week 5 : DNA Replication, Polymerases, DNA Sequencing and PCR

Week 6: DNA damage, mutation and cancer

Week 7: DNA to proteins: transcription, translation and genetic code`

Week 8: Protein Sequencing and Solid Phase Peptide Synthesis (SPPS)

Week 9: Chemical Synthesis of Peptides and its therapeutic applications; Spectroscopic techniques for biomolecules.

Week 10: Modern techniques for biomolecules study, purification and characterization; Molecular probes

Week 11: Molecular probes and Chemistry of carbohydrates

Week 12: Chemistry of carbohydrates and Recap

● Lecture 34: Carbohydrate chemistry -II: Polysaccharides and its nanoparticles

● Lecture 35: Carbohydrate chemistry -III: Synthesis of nanoparticles; Recap of all modules.

○ Quiz : Assignment 12

○ Lecture notes: Week 12

○ Weekly feedback form for week 12

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Assignment 12

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

Due on 2020-04-22, 23:59 IST.

1) Which of the following statements is/are false?

2 points

- Heparin is obtained from plants having two monomeric units
- Biofilms make antibiotic less effective.
- Peptide can be attached to the free hydroxyl group of chitosan via amide coupling reactions
- Poly ethylene glycol attachment increases hydrophilicity in chitosan

No, the answer is incorrect.

Score: 0

Accepted Answers:

Heparin is obtained from plants having two monomeric units

Peptide can be attached to the free hydroxyl group of chitosan via amide coupling reactions

2) Why is Chitin converted to chitosan?

2 points

- Chitin is toxic in nature
- To enhance solubility
- Impart functional group
- All of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

To enhance solubility

Impart functional group

3) Which of the following statements is/are true about nanoparticles synthesized from polysaccharides?

2 points

- has low toxicity
- are biodegradable and biocompatibles
- polysaccharides can be used as reducing agents
- Contains functional groups on the surface

No, the answer is incorrect.

Score: 0

Accepted Answers:

has low toxicity

are biodegradable and biocompatibles

polysaccharides can be used as reducing agents

Contains functional groups on the surface

4) Gold nanoparticles:

2 points

- Upon aggregation gives dark pink color
- Can be used to check single base mutation in DNA
- Cannot be used to check immobilizations

No, the answer is incorrect.

Score: 0

Accepted Answers:

Can be used to check single base mutation in DNA

5) Which of the following is an epimeric pair?

1 point

- D-Glucose and D-Glucosamine
- D-Glucose and D-Mannose
- D-Glucose and L-Glucose
- D-Lactose and D-Sucrose

No, the answer is incorrect.

Score: 0

Accepted Answers:

D-Glucose and D-Mannose

6) Minimum number of Carbon required for a monosaccharide to form are:

1 point

- 1
- 2
- 3
- 4

No, the answer is incorrect.

Score: 0

Accepted Answers:

3