

# Unit 9 - Week 7

**Course outline**

How does an NPTEL online course work?

**Week 0 Assignment 0**

**Week 1**

**Week 2**

**Week 3**

**Week 4**

**Week 5**

**Week 6**

**Week 7**

- Lecture 13 : Lipids and membranes - I
- Lecture 14 : Lipids and membranes - II
- Lecture 15 : Membrane Transport
- Lecture material of Week 7

Quiz : Week 7 Assignment 7

Week 7 Feedback Form

**Week 8**

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## Week 7 Assignment 7

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

**Due on 2020-03-18, 23:59 IST.**

- 1) Phospholipids are molecules that contain:
- a) Long water-soluble carbon chains
  - b) Positively charged functional groups
  - c) Hydrophilic heads and hydrophobic tails
  - d) Amino acids
- a)
- b)
- c)
- d)
- No, the answer is incorrect.  
Score: 0  
Accepted Answers: c)
- 2) The glycerophospholipids are composed of two fatty acids attached to glycerol and one of the following head groups:
- I. ethanalamine
  - II. choline
  - III. serine
- a) I and II
  - b) II and III
  - c) I and III
  - d) I, II and III
- a)
- b)
- c)
- d)
- No, the answer is incorrect.  
Score: 0  
Accepted Answers: d)
- 3) The melting properties of fatty acids and lipid bilayers is due primarily to
- a) van der Waals forces
  - b) hydrogen bonds
  - c) the hydrophobic effect
  - d) electrostatic interactions
- a)
- b)
- c)
- d)
- No, the answer is incorrect.  
Score: 0  
Accepted Answers: a)
- 4) Cholesterol is essential for normal membrane functions because it
- a) spans the thickness of the bilayer
  - b) keeps membranes fluid
  - c) catalyses lipid flip-flop in the bilayer
  - d) plugs up the cardiac arteries
- a)
- b)
- c)
- d)
- No, the answer is incorrect.  
Score: 0  
Accepted Answers: b)
- 5) What are the membrane structures that function in active transport?
- a) peripheral proteins
  - b) carbohydrates
  - c) integral proteins
  - d) hydrophobic molecules
- a)
- b)
- c)
- d)
- No, the answer is incorrect.  
Score: 0  
Accepted Answers: c)
- 6) All of the following are found in membranes except:
- a) nucleic acids
  - b) phospholipids
  - c) glycoproteins
  - d) glycolipids
- a)
- b)
- c)
- d)
- No, the answer is incorrect.  
Score: 0  
Accepted Answers: a)
- 7) Which of the following is **not** an example of a lipid found in a lipid-linked protein?
- a) Farnesyl groups
  - b) Stearic acid
  - c) Myristic acid
  - d) Palmitic acid
- a)
- b)
- c)
- d)
- No, the answer is incorrect.  
Score: 0  
Accepted Answers: b)
- 8) Plasma membranes are made up of
- a) Proteins, lipids, carbohydrates
  - b) Lipids, carbohydrates
  - c) Proteins, lipids
  - d) Proteins, carbohydrates
- a)
- b)
- c)
- d)
- No, the answer is incorrect.  
Score: 0  
Accepted Answers: a)
- 9) The simplest hydrophilic moiety present in the membrane lipid is
- a) the phosphate group
  - b) the hydroxyl group
  - c) an amino group
  - d) glucose
- a)
- b)
- c)
- d)
- No, the answer is incorrect.  
Score: 0  
Accepted Answers: b)
- 10) The resting membrane potential is mainly determined by:
- a) the Cl<sup>-</sup> gradient
  - b) the Na<sup>+</sup> gradient
  - c) the K<sup>+</sup> gradient
  - d) the Ca<sup>2+</sup> gradient
- a)
- b)
- c)
- d)
- No, the answer is incorrect.  
Score: 0  
Accepted Answers: c)
- 11) Which of the following is considered as a structural parent of all sphingolipids?
- a) Sphingosine
  - b) Lecithin
  - c) Sphingomyelin
  - d) Ceramide
- a)
- b)
- c)
- d)
- No, the answer is incorrect.  
Score: 0  
Accepted Answers: d)
- 12) Which of the following induces conformational change in protein?
- a) Uniport
  - b) Symport
  - c) Facilitated diffusion
  - d) Antiport
- a)
- b)
- c)
- d)
- No, the answer is incorrect.  
Score: 0  
Accepted Answers: c)
- 13) The most abundant membrane lipids in the biosphere are
- a) phospholipids
  - b) galactolipids
  - c) sphingolipids
  - d) ether lipids
- a)
- b)
- c)
- d)
- No, the answer is incorrect.  
Score: 0  
Accepted Answers: b)
- 14) Receptors for steroid hormones usually reside in the
- a) plasma membrane
  - b) cytoplasm
  - c) nuclear membrane
  - d) nucleoplasm
- a)
- b)
- c)
- d)
- No, the answer is incorrect.  
Score: 0  
Accepted Answers: d)
- 15) The resting potential is dependent upon the electrochemical gradient for potassium ions because:
- a) Cells contain largely potassium
  - b) The permeability to sodium ions is very small except during action potentials
  - c) The permeability of the resting membrane to potassium is higher than for other ions
  - d) Of the activity of the sodium/potassium ATPase
- a)
- b)
- c)
- d)
- No, the answer is incorrect.  
Score: 0  
Accepted Answers: c)