

# Lecture 1 Quiz

⚠ This is a preview of the published version of the quiz

Started: Apr 12 at 11:12pm

## Quiz Instructions

Please select the best answer for each question. You may look back at notes and lectures, but only get one chance to do the quiz.

### Question 1

1 pts

What is the main function of the  $B_0$  field?

- Spatial Encoding
- Polarizer
- Exciter

### Question 2

1 pts

The ideal  $B_0$  field is:

- Static and spatially homogeneous
- Static and spatially inhomogeneous
- Dynamic and spatially inhomogeneous
- Dynamic and spatially homogeneous

**Question 3****1 pts**

The Larmor equation is a consequence of:

- Protons, electrons, and neutrons
- Spin, mass, and charge
- B-fields and E-fields

**Question 4****1 pts**

Which field is static?

- B0-field
- Gradient field
- B1-field

**Question 5****1 pts**

How do  $B_0$  and  $B_1$  compare in magnitude?

- $B_0$  is mT and  $B_1$  is  $\mu$ T
- $B_0$  is T and  $B_1$  is  $\mu$ T
- $B_0$  is T and  $B_1$  is mT
- $B_0$  is T and  $B_1$  is mT

**Question 6****1 pts**

Which of the following is true?

- Protons nutate, RF pulses induce spin.
- Protons spin, RF pulses induce nutation.
- Protons precess, magnetic dipoles spin.
- Protons spin, magnetic dipoles nutate.

**Question 7****1 pts**

Which best describes free precession?

- Spins caused to precess by B0 and B1.
- Spins caused to nutate by B1.
- Spins caused to precess by B0.
- Spins caused to precess in the absence of both B0 and B1.

**Question 8****1 pts**

Which of the following is true?

- T1 governs Mx and My; and T2 governs Mz.
- T1 governs Mz; and T2 governs Mx and My.
- T1 governs My and Mz; and T2 governs Mz.

T1 governs Mx and Mz; and T2 governs My.

### Question 9

1 pts

Which of the following is true?

Fat T1 < CSF T1

CSF T2 = Muscle T2

Fat T1 > CSF T1

CSF T2 < Muscle T2

Quiz saved at 11:12pm

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