Lecture 2 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 gradients?

- ○ Spoiling
- ○ Polarizer
- ○ Exciter
- ○ Spatial encoding

Question 2 — 1 pts

Gradients can create a spatial gradient in:

- ○ Tissue heating
- ○ Flip angle
- ○ Frequency or phase
- ○ Spin polarization

Question 3

1 pts

Spatial encoding for 2D MRI typically requires:

- ◯ Frequency, then phase, then slice encoding.
- ◯ Slice, then phase, then frequency encoding.
- ◯ Phase, then slice, then frequency encoding.

Question 4

1 pts

The small tip angle approximation does not…

- ◯ Assume Mz is constant.
- ◯ Assume Mxy is constant.
- ◯ Tell us how to define the slice select gradient.
- ◯ Tell us how to define B1E.

Question 5

1 pts

The MRI signal equation…

- ◯ Relates T2 to the signal amplitude.
- ◯ Relates T1 to the signal amplitude.
- ◯ Relates Mz and spatial encoding to the acquired signals.

- ◯ Relates Mxy and spatial encoding to the acquired signals.

Question 6

1 pts

A point in k-space represents…

- ◯ The T2 of the tissue.
- ◯ The T1 of the tissue.
- ◯ The presence or absence (amount) of a protons in the object being imaged.
- ◯ The presence or absence (amount) of a particular spatial frequency in the object being imaged.

Question 7

1 pts

Phase encoding is not…

- ◯ Adding a linear spatial variation of phase across the object.
- ◯ Applying several phase encode steps per echo.
- ◯ After excitation and before readout.
- ◯ Repeated once per TR with a different amplitude.

Question 8

1 pts

Frequency encoding is not…

- Required to excite spins.
- Adding a linear spatial variation of frequency across the object being imaged.
- Played after other gradients or RF.
- Constant magnitude for Cartesian imaging

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