**fMRI**

**Question 1**:

**Answer:**- [R.1] fMRI is a relatively new procedure that uses MR imaging to measure the metabolic changes that take place in an active part of the brain. It help to know about which part of the brain is handling the critical function. It may found the abnormality in the brain tat you can’t able to find out with the help of other imaging technique. [R.2] Additionally, fMRI technology does not involve the exposure to x-rays or other radioactive stuff required by the other imaging methods. fMRI gives power to scientist to analysis the brain activity that correlates with thoughts and behaviors.

Scanner that we used for fMRI have range of 1.5 to 4.0 Tesla, now it becoming available of range up-to 7.9 Tesla.

**Question 2**:-

**Answer**:- [[R.3](https://teenspecies.github.io/pdfs/NeuralCorrelates.pdf)]In 2009 Craig Bennett and Abigail perform fMRI on dead salmon. Later, when they analysis their data actually produced evidence of brain activity as dead fish is alive and thinking. And that’s not possible, this is not likely physiological artifact; it actually statically one.

The work as a warning about the dangers of false positives in fMRI data. The study behind it to generate idiotic false positive in order to show false positive in fMRI studies. Image of human brain helps us to understand human brain activity but it’s also misleading us because we doesn’t have a good idea what the picture show and with lack of information we end with false positives value.

[[R.3](https://teenspecies.github.io/pdfs/NeuralCorrelates.pdf)]In order to avoid of getting false positive value researchers should make a statistical correction for multiple comparison.

**Question 3**:-

**Answer**:- [[R.4](http://pubs.rsna.org/doi/pdf/10.1148/radiographics.21.3.g01ma23767)]Echo planer is capable of shortening magnetic resonance imaging times. In advancement of digital data acquisition technology made possible to take individual imaging. Echo-planer imaging allows acquisition of image(MR slices in time frame) in 20- 100 msec. This time will minimize the effects of patient motion.

**Reference**:-

**R.1**. Kenning, P., Plassmann, H., Ahlert, D. (2007). Applications of functional magnetic resonance imaging for market research. *Qualitative Market Research, 2*, 135-152

**R.2**. Nelson, C. A. (2008). Incidental findings in magnetic resonance imaging (MRI) brain research. *Journal of Law, Medecine and Ethics*(Summer), 315-319.

**R3**. Craig M. Bennett, Abigial, Michael B. Miller. [Neural Correlates of Interspecies Perspective Taking in the Post-Mortem Atlantic Salmon: An Argument](https://teenspecies.github.io/pdfs/NeuralCorrelates.pdf) *For Proper Multiple Comparisons*

# R4. Mehdi Pustchi-Amin, Scott A. Mirowitz, Jeffery F. Brown. [Principles and Applications of Echo-planar Imaging:](http://pubs.rsna.org/doi/pdf/10.1148/radiographics.21.3.g01ma23767) *[A Review for the General Radiologist](http://pubs.rsna.org/doi/pdf/10.1148/radiographics.21.3.g01ma23767)*