Brain Computer Interfaces in Medicine

**Questions**

1. What is the main purpose of the output device used in brain computer interfaces ?
2. What is the role of a computer in a brain computer interface ?
3. When did human investigations with brain computer interfaces begin ?
4. What is the P300 ?
5. In which year did Farwell and Donchin found the way to spell words on a computer screen using the P300 speller ?
6. What kind of signal can we use in a BCI ?
7. What are the pros and cons of a scalp EEG ?
8. What are the pros and cons of small intracortical microarrays ?
9. What are the pros and cons of ECoG-based BCIs ?
10. What are the main problems with MEG and fMRI ?
11. What do we need to consider in order to choose appropriately the signal we want to acquire ?
12. What are the 4 sequential components of a BCI ?
13. What is the controller of these components ?
14. What is the purpose of each component ?
15. Which kind of signal do the P300 speller use ?
16. Which domains of sciences are required in order to move the research from laboratories to patients homes ?
17. Why headsets with scalp sensors on the market are not actual BCIs ?
18. What is IntendiX ?
19. What are the problems that researchers will be confronted to in the future ?
20. What was the syndrome of the patient who got intracortical microelectrodes in glass cones implanted in his brain ?