St Mary's School
CAMBRIDGE

Lower Sixth Psychology

Sample Entrance Examination

Time allowed: 30 minutes

Name: _____

INSTRUCTIONS :

- **Answer all questions**
- **Answers should be written in the spaces provided**
- **Dictionaries or reference materials are forbidden**

Please **read the article** and **answer the questions below**. Question 4 is an opportunity for you to **show any knowledge** you may already have of Psychology.

Neuroscientist Jim Fallon, at Irvine, University of California, scanned his own brain, along with the brains of his colleagues, to use as a control group of "normal" brains and found that his brain scan was that of a murderer. Years before, his research had looked for brain differences in serial killers, so he recognised the pattern in his scan as soon as he saw it. He was intrigued and set out to investigate his family history, only to discover the large number of killers and serial killers in his ancestry.

Jim Fallon's findings can be linked to a recent court case in Italy. Stephania Albertani was on trial for murdering her sister and then planning to murder her parents. Upon viewing a scan of Albertani's brain and comparing it to those of ten healthy women, neuroscientists and geneticists appealed and Albertani's prison sentence was reduced from life to 20 years.

This is highly controversial, not least because of Jim Fallon's findings. His brain is also "abnormal" and "abnormal" in a pattern which fits with serial killing tendencies, yet he has never killed anyone. Thus, psychologists must ask: can we overcome our brain pattern tendencies?

The issue here is freewill versus determinism. To what extent do we shape our lives with the choices we make or, on the opposite end of the spectrum, how much of who we are is predetermined by the genes we are born with and the situations we are born into?

1) What did Jim Fallon think caused some people to become serial killers?
2) Why did neuroscientists compare Stephania Albertani's brain scan to brain scans of "ten healthy women"?
3) Other than genetics, suggest another reason why people behave in different ways.
4) Write at least a paragraph which explains what you think you will find interesting about studying Psychology at A-level.