**Entrance Scholarship Paper 2018**

**Psychology**

**Time allowed: 2 hours**

**Answer TWO questions. Please use a separate booklet for each answer. Feel free to build your argument by drawing on several domains of psychology, if appropriate. However, make sure that your answer is based on the scientific literature on each topic, and not only on your speculations.**

1. Psychologists have a range of different tools to help them investigate the human brain and behaviour. Two of these tools are Functional Magnetic Resonance Imaging (fMRI) scanners and electroencephalogram **(**EEG) devices. Explain the key differences between fMRI and EEG. Why might a researcher choose to use one over the other?
2. For years now, researchers have been warning about a reproducibility crisis in science. In 2015, Brian Nosek attempted to replicate 100 classic social psychology experiments. According to his analysis, only 39 of the 100-replication attempts were successful. Discuss the various factors that might explain this finding. What are the implications for social psychology?
3. In 1975 Csíkszentmihályi described a new phenomena he referred to as ‘flow’. What is ‘flow’ and how is it relevant to analysing athlete’s performance?
4. Describe and evaluate ONE core study in the field of developmental psychology. What are the practical implications of this study?
5. Imagine you are trapped in the Australian outback in a group with nine C-list celebrities. You have limited food supplies and you are forced to complete a number of stressful tasks to earn extra food rations. You’ve never met these other celebrities before and at first glance you have very little in common. According to Tuckman (1965) how will you transform from a group of individuals to a team? Why might you not reach the final stage?
6. Psychological research is frequently criticised for being ethnocentric (or at least Eurocentric) and as a result this negates the findings for the vast majority of published research. What does this criticism mean, and do you think this is valid? Please refer to a range of studies in your answer.
7. When designing an experiment in psychology what are the key ethical factors you need to consider?
8. Evaluate the differences between using an independent group design and a repeated measures design. If you were designing an experiment that assessed the impact of eating of chocolate to reduce stress, suggest what the pros and cons would be if you were to use, an independent groups design and secondly, a repeated measures design.
9. Television crime series such as Criminal Minds, Law & Order and NCIS make extensive use of criminal profiling. From a psychological perspective, what factors can profiling accurately predict and what is simply fiction? Please refer to genuine criminal cases in your answer.
10. You’ve been commissioned by Lord Sugar to test the effectiveness of two different adverts (Advert A and Advert B) promoting a new brand of chocolate bar, developed by a team of enthusiastic amateurs. In order to decide which advert to use as part of a nationwide advertising campaign Lord Sugar asked his assistant Claude Littner to conduct some market research at a local shopping centre. Claude used a between subject design and each participant was shown an advert and asked to state the likelihood that they would buy the chocolate bar out of 10 (with 10 being "definitely going to buy the product" and 1 “definitely not going to buy the product”). The results of which are shown below. How would you analyse which advert is likely to be the most successful? Describe the process in detail (although you do not have to perform any actual statistics test)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Participant | Advert | Rating |  | Participant | Advert | Rating |
| 1 | A | 6 |  | 21 | A | 7 |
| 2 | B | 5 |  | 22 | B | 2 |
| 3 | A | 2 |  | 23 | A | 5 |
| 4 | B | 8 |  | 24 | B | 6 |
| 5 | A | 6 |  | 25 | A | 4 |
| 6 | B | 7 |  | 26 | B | 6 |
| 7 | A | 2 |  | 27 | A | 5 |
| 8 | B | 8 |  | 28 | B | 6 |
| 9 | A | 1 |  | 29 | A | 3 |
| 10 | B | 9 |  | 30 | B | 8 |
| 11 | A | 5 |  | 31 | A | 7 |
| 12 | B | 6 |  | 32 | B | 9 |
| 13 | A | 7 |  | 33 | A | 6 |
| 14 | B | 8 |  | 34 | B | 10 |
| 15 | A | 7 |  | 35 | A | 5 |
| 16 | B | 9 |  | 36 | B | 8 |
| 17 | A | 2 |  | 37 | A | 6 |
| 18 | B | 8 |  | 38 | B | 8 |
| 19 | A | 3 |  | 39 | A | 5 |
| 20 | B | 5 |  | 40 | B | 7 |