

KING'S COLLEGE LONDON
INSTITUTE OF PSYCHIATRY, PSYCHOLOGY AND NEUROSCIENCE
MSc NEUROSCIENCE EXAMINATION
16th March 2015 at 14.00-16.30pm
Cognitive Neuroscience
B7 WRITTEN EXAMINATION

Answer FOUR questions only

1. What is cognitive neuroscience and how does it differ from phrenology?
2. What is the Default Mode Network of the resting brain and what is its function?
3. Discuss the roles of different brain areas in cognitive control.
4. The link between dopamine and working memory has been described as an inverted-U shaped function - too much or too little prefrontal dopamine impairs performance. Design a study to test a new dopaminergic treatment for working memory deficits in schizophrenia that takes the inverted-U shaped model into account. Provide clear reasoning for each of your decisions.
5. Compare and contrast the main research approaches used to examine the influence of sex hormones in sexually-dimorphic cognitive functions and associated brain activations.
6. Discuss the main brain structures that support episodic long-term memory and the different theories concerning how this type of memory is consolidated.
7. How has the study of defensive reactions contributed to our understanding of fear and anxiety?
8. Discuss the main methods for investigating genetic effects on cognitive and brain functions and how they contribute to our understanding of a psychiatric illness.