

UNIVERSITY OF LONDON
NEUROSCIENCE MSc EXAMINATION

**For Internal Students of the
INSTITUTE OF PSYCHIATRY
King's College London**

18th February 2011 at 09:00 - 11:30

PAPER A3

Answer FOUR questions only

1. Describe the major structural and functional differences between the anterior and posterior pituitary gland and illustrate your answer by describing the release systems controlling one hormone from the anterior and posterior parts.
2. Discuss the three components of pain perception: 1) sensory, 2) motivational-affective and 3) cognitive.
3. Describe the pharmacological mechanisms responsible for the dependence-producing effects of amphetamine, cocaine, nicotine and morphine.
4. Describe the molecular and cellular effects of opiates in the VTA-NAc pathway.
5. Describe with examples, how genetic animal models have furthered our understanding of psychiatric disorders.
6. Describe the distinction between declarative and procedural memory. How are these different types of memories affected in amnesia?
7. What is the evidence that schizophrenia is a disorder of neurodevelopment?
8. What distinguishes 'atypical' from 'typical' antipsychotics? Describe advantages and limitations of current pharmacological treatments for schizophrenia.
9. Compare and contrast the use of PET and fMRI in neuroscience research.
10. Discuss the necessity to non-invasively image transplanted cells. What are the alternatives?