**Cognitive level of analysis (CLOA)**

**General Learning Outcomes**

* Outline principles that define the CLOA SAQ only (SAQ Nov 2011)
* Explain how principles that define the CLOA may be demonstrated in research See below
* Discuss how and why particular research methods are used at the CLOA See below
* Discuss ethical considerations related to research studies at the CLOA (SAQ 2012 x 2)

Asked for one ethical consideration related to one research study. Read question carefully. Ethical considerations can be positive (what guidelines could be followed) or negative (what guidelines were not followed). The focus of the response should be on the ethical consideration and not on the description of a study. PICWDD’s. Confidentiality-Clive wearing. Informed consent-HM. Deception-Loftus and Palmer (2nd experiment, broken glass question). Psychological stress-Loftus and Burns (Video of crime boy shot in head). Psychological stress and deception-Loftus (argument, bloody knife)

**Cognitive processes**

* Evaluate schema theory with reference to research studies. (SAQ May 2011) (ERQ Nov 2011) Should have an essay plan.
* Evaluate two models or theories of one cognitive process with reference to research studies. (ERQ 2012) Should have an essay plan.
* Explain how biological factors may affect one cognitive process. See below
* Discuss how social or cultural factors affect one cognitive process. (ERQ May 2011)

Cultural differences in memory. Difficult as an ERQ. Make sure you have one good study for an SAQ. In the response the focus would be on cultural factors. Cole and Scribner (1974) p80 of textbook and p26 of study guide. Rogoff and Waddel is also appropriate (1982) and easier to remember.

* With reference to relevant research studies, to what extent is one cognitive process reliable (ERQ May 2011)

Process of memory: Reconstructive (Schema’s), EWT, Flashbulb. Include examples of when it is and isn’t reliable.

* Discuss the use of technology in investigating cognitive processes (ERQ 2012)

As an SAQ re-use Corkin et al’s MRI of HM. Establish the cognitive process as being memory. Discussion may include, but is not limited to: ethical considerations of the use of technology, efficacy of technology in measuring cognitive processes, cost/benefit analysis, issue of reductionism, comparison of technologies.  The focus of the response should be on the use of technology in investigating cognitive processes. Candidates should not simply evaluate studies in which technology has been used.

**Cognition and emotion**

* To what extent do cognitive and biological factors interact in emotion See below
* Evaluate one theory of how emotion may affect one cognitive process (SAQ May 2011) Flashbulb memory. Should have an essay plan.

**Never been used**

* Explain how principles that define the CLOA may be demonstrated in research

You need at least 2 principles with a clear link to appropriate research.

* Discuss how and why particular research methods are used at the CLOA

Include, laboratory experiments, case studies, questionnaires (Brown and Kulik), brain imaging. See essay structure for biological for guidance.

* Explain how biological factors may affect one cognitive process.

The question demands that two different factors are included in the response.

Biological factor 1

See study guide p24. Damage to the hippocampus and amnesia. Also links to BLOA. Milner OR Scoville and Milner who first described HM

* Explain what caused the damage
* Explain the effect on HM’s memory specifically
* What is the relationship between the brain and memory from HM. Specify the role of the hippocampus
* Describe specific evidence from Corkin’s (1997) use of MRI

Also supported by the case study of Clive Wearing. See p78 Textbook.

Biological factor 2

See study guide p25. High levels cortisol and memory deficits. High levels of cortisol and memory deficits. Lupien et al (1998) AND follow up in (2002)

* Explain what cortisol is and when it is released.
* Explain the link with memory
* Outline evidence from Lupien et al 1998
* Outline evidence from the follow up study 2002
* Evaluate the study
* To what extent do cognitive and biological factors interact in emotion

**This is a big one. You need to plan for a 22 marker.**

**Use p88-90 of the Textbook and p30-31 of the study guide. This will be HW.**