Exam PSY1300/PSYC1230, v19, grading instructions

The grading instructions are formulated for graders with good background knowledge in cognitive psychology. Accordingly, the instructions only highlight the key aspects, which should be discussed in an ideal answer to the given question. The provided instruction <u>should not be seen as examples</u> of ideal answers to the questions.

1. General grading instruction

Only 3 of 4 questions listed above had to be answered. Each question gives max. 5 points so that the total exam yields a maximum of 15 points. The instructions below provides guidelines for awarding points by subquestion. Maximal points per sub-question are indicated in brackets (see *Key points to be addressed in answer).* However, should an answer in one subquestion be particularly well formulated it might be used to compensate a "point loss" in another subquestion within the *same* question. Likewise, penalization is possible (i.e., for unstructured writing, or extensively long answers which are not to the point).

Points-to-grade conversion: 5 points (33%) will be the "pass threshold" and grades should accordingly be assigned as:

<p style="text-align:center">0-4.99 pts = F,</p>

<p style="text-align:center">5-6.99 pts = E,</p>

<p style="text-align:center">7-8.99 pts = D,</p>

<p style="text-align:center">9-11.99 pts = C,</p>

<p style="text-align:center">12-13.99 pts = B,</p>

<p style="text-align:center">14-15.00 pts = A.</p>

Cautious note: Please contact me (rene.westerhausen@psykologi.uio.no) if you have any questions or notice any irregularities during grading. For example, in the past it has occurred that one question was too difficult, i.e. no candidate got 5 points in this question. In this case, as all the questions should be of approximately the same difficulty, the grading was adjusted accordingly (i.e., the question was weighted when summing up the total score). I encourage to use an excel table to track the points per question across all candidates. If you do so, please

feel free to share it with me after grading so that I can assess difficulty of the questions and systematic inter-grader differences etc to be able to improve the objectivity of the instruction.

References:

- Gilhooly, K., Lyddy, F. and Pollick, F. (2014). *Cognitive Psychology*. London: McGraw Hill. ISBN13-9780077122669;
- Groome & Eysenck (2016). An introduction to applied cognitive psychology (2nd edition). Psychology Press.

2. Questions and key points

2.1 Question 1

- ***Attention.*** (a) Continuity mistakes in movies (illogical changes between two consecutive scenes) often go unnoticed. How is this phenomenon called in cognitive psychology? Describe the phenomenon in general terms and suggest how it can be studied in an experiment. (b) Describe the (Perceptual) Load Theory (Lavie, 2005) and use it to explain the above phenomenon. (c) Using Lavie's theory, how can a film director reduce the likelihood that viewers notice continuity mistakes?

Key points to be addressed in answer:

(a) change blindness = the failure to detect changes in the physical aspects of a scene due to not attending the changes (1p); Any good conceptualisation of an experiment, e.g., following the classical experiment by Rensink et al (1997) (1p) (Gilhooly, p.96) **[max 2p]**

(b) Lavie's "load theory", basic idea: the amount of processing of unattended stimuli depends on the difficulty of the processing of the attended stimuli (i.e. "load"; Gilhooly, p.81) – correctly relating the theory to "early" vs "late" attentional selection can be seen as bonus (1p). Thus, "change blindness" occurs since the processing of the attended stimulus is so demanding that the likelihood of detecting the irrelevant stimulus is reduced (1p); **[max 2p]**

(c) any good argumentation, should include sth like "make sure that the focus of attention is overloaded with important information, i.e. demands attentional resources; should be argued on an theoretical level not just by examples (1p). **[max 1p]**

2.2 Question 2

- ***Working memory***: (a) Name and briefly describe the four (4) major components of Baddeley's working-memory model? (b) How would these components interact during the following task: typing a telephone number, you found on a webpage, into your phone? (c) During this task, would it be more interfering to listen to instrumental music or an audiobook? Briefly describe why.

Key points to be addressed in answer:

(a) Phonological loop, episodic buffer, visual spatial sketchpad, central executive + brief explanation for each in accordance textbook (each 0.5p; Gilhooly p. 124-128) **[max 2 points]**

(b) Min answer: the phonological loop component (i.e., articulatory control processes) would *convert* the visual information (from *visuo-spatial sketchpad*) into speech-based information, which based (*sub)vocal rehearsal mechanisms* are kept in the phonological loop. This is controlled by the *central executive* (highlighted aspects each 0.5p). **[max 2 points]**

(c) It would be equivalent to the so-called *articulatory suppression effect* (only full points if named), interfering with the subvocal rehearsal (see Gilhooly, p. 126) **[max 1 point]**

2.3 Question 3

- **Learning** (a) Why and how does the proverbial "knot in a handkerchief" help remembering. (b) Explain "context-dependent" and "state-dependent" effects during memory retrieval and give one example for each of the two; (c) How can one use these effects to enhance memory performance during an examination?

Key points to be addressed in answer:

(a) Memory retrieval is cue-dependent = retrieval is interaction between cue and memory trace. A memory trace containing multiple facets of information present at encoding can be accessed via retrieval cues matching to these facets. Thus, a "knot" made while encoding of the memory trace can become a retrieval cue when encountered at a later state. (see Groome, p. 138-141); **[max 2 points]**

(b) Encoding-specificity principle: Retrieval is enhanced when the cues available (during retrieval) match the features present/stored during encoding, this includes context features or state/mood features. Examples, in lecture/book were diving/learning context study and mood induced by music (Gilhooley, p.185-186, Groome, p. 140/141). **[max 2 points]**

(c) Being in the same context or state when leaning, also "Mental context reinstatement"/imagery might be mentioned here **[max 1 point].**

2.4 Question 4

- Language production. (a) Name the smallest meaningful sound units in a language. When are they acquired? (b) Define the productivity of human language. How is it achieved? (c) Name the five stages of speech production proposed by Garett (1985). What happens at the Functional level?

Key points to be addressed in answer:

(a) Phonemes (0.5p) which are acquired during early childhood (0.5p) (Gilhooly, p.367) **[max 1 point]**

(b) Two aspects: We construct novel sentences when we speak; we do not generally repeat back or 'parrot' previous productions. Similarly, we do not rely on stock phrases, or on memory for practised utterances. Instead we create new sentences as and when we need them. (1p) We apply syntactic/morphological rules. One of them is recursion (repeated application of a rule, the same rule can be applied again and again to create a novel utterance) (1p) Bonus if student mentions recursion. (Gilhooly, p.369) **[max 2 points]**

(c) Conceptual, (functional), positional, phonological and articulation (1p = 0.25 points for all but functional level, which is given in the next question). At the functional level, the syntactic and semantic framework of the sentence is constructed. Or, in other words, there is lexical selection (choose words) and syntactic role attribution (subject, verb, object). [Either of the answers is correct = 1 point]. (Gilhooly, p. 380) **[max 2 points].**