

SENSURVEILEDNING

Answer two out of the following three questions:

Svar på to av følgende tre oppgaver:

Emnekode og navn: PSY1122/PSYK4122	Semester / År / Eksamenstype: V2022/ Skriftlig eksamen, 4 timer
Oppgave 1:	
<p>Explain the difference between "sensation" and "perception." Be sure to include a discussion of where or how these concepts overlap (if they do overlap) as well as where or how they do not overlap (if they do not overlap).</p> <p>Forklar forskjellen mellom sansning og persepsjon. Sikre at du inkluderer en diskusjon om hvor eller hvordan disse begrepene overlapper (hvis de overlapper) såvel som hvor eller hvordan de ikke overlapper (hvis de ikke overlapper).</p>	
Relevant pensumlitteratur:	
Gilhooly, K., Lyddy, F. and Pollick, F.: Cognitive Psychology, Chapter 2.	

Eksamenskrav:

Sensation vs Perception

We have five different sensory organs: eyes, nose, ears, tongue, and skin. These five sensory organs are responsible for receiving different stimulations around us through seeing, smelling, hearing, tasting, and, finally, feeling through the skin. The signals which are received through our sensory organs from the environment around us are called sensations. Simply put, sensations are what our sense organs receive and transmit to the brain. Once the brain receives the stimulus, it converts the whole signal into feelings, taste, sound, sight, and smell. On the other hand, perception is almost like a sixth sense. It is what we perceive or form an opinion on of anything and everything happening around us.

The perception of a person is an absolutely personal experience. It is what a person thinks about his or her environment, and it is how the person looks at the world around him. It is more of a psychological concept than anything physical like sensations. Two different people can have different perceptions about the same thing. For example, in body image, a healthy person has a different perception about his or her body. Healthy people, even if they are a little overweight, react and see themselves differently and accept who they are or work towards achieving what they want. Once they achieve it, they stop. While an anorexic person, no matter how slim, no matter how underweight, has a perception that they are still overweight and stops eating food altogether to achieve, what they perceive, to be the right body for them.

Perception is what a person wants to believe, their personal opinion. People of different generations or people of different religions or people from different backgrounds have a difference of opinion only because they perceive everything differently. Wise people try to understand the perceptions of other people whereas unwise people believe that what they perceive about a situation or about a person is the only correct perception.

Perception and sensation are different mostly because sensation is more physical. Sensations arise only because the body receives a stimulus, and the body reacts to it converting the stimulus into one of the things that one of the sensory organs of the body can identify. However, perception is absolutely psychological. Perceptions are individual thoughts of individual people.

Summary:

Sensation is the process of hearing, smelling, feeling, tasting, and seeing as a result of external stimulations received by the five sensory organs of the body; ears, eyes, nose, tongue, and skin. Perception, however, is the mental image of something or somebody made due to the different actions exhibited by the environment around us.

Karakterbeskrivelse:

<https://innsida.ntnu.no/wiki/-/wiki/Norsk/Karakterskalaen>

Faglærer / oppgavegiver:

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Sted / dato: Trondheim, 03/03/2022

Oppgave 2:

Explain the processes involved in language comprehension.

Forklar prosessene som er involvert i språkforståelse.

Relevant pensumlitteratur:

Gilhooly, K., Lyddy, F. and Pollick, F.: Cognitive Psychology, Chapter 11.

Eksamenskrav:

Students may focus on topics from chapter 11. Explanations of the challenges and fundamental processes in language comprehension are relevant: The invariance problem, segmentation, speech perception, categorical perception are all very relevant topics to discuss. So are top-down influences, audiovisual perception, models of speech perception which can be focused on one or two of the models explained in chapter 11. Comprehending words and sentences, lexical access and priming effects. Both syntactic and semantic influences on comprehension are relevant. The answer may not focus solely on oral understanding. Writing systems and context effects on visual word recognition are relevant. So is the neuropsychological angle on both oral and written language comprehension. Students are free to include or exclude any of the mentioned topics. If something is excluded and just a few topics are focused, the answer should be more in-depth on those.

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Oppgave 3:

Choose an example problem: playing chess, improvising a mechanical gadget or a meal from what happens to be available, composing music, entertaining a child, or whatever else you want. How can the various working and long-term memory systems contribute to solving

your problem? How much does the importance of a memory system depend on how well-defined the problem is, and how knowledge-rich it is?

Note: you are being asked to apply your knowledge, rather than just reproduce what you read. Also, the book mentions some of the relevant information only briefly. Therefore, you do not have to be right in every detail, so long as your reasoning is sound.

Velg et problem som eksempel: du skal spille sjakk, improvisere i å bruke en mekanisk innretning eller et tilberede et måltid fra tilgjengelige råvarer, komponere musikk, leke med et barn, eller hva som helst annet du kommer på. Hvordan kan de ulike arbeids-, og langtidsminnesystemene bidra til å løse problemet ditt? Hvor mye vil viktigheten av et hukommelsessystem avhenge av hvor veldefinert problemet er, og hvor kunnskapsrikt det er?

Merk: Du skal anvende kunnskapen din heller enn å reprodusere hva du har lest. Boken nevner noe av den relevante informasjonen i korthet. Derfor trenger du ikke å ha hver detalj riktig så lenge din argumentasjon er god.

Relevant pensumlitteratur:

Gilhooly, K., Lyddy, F. and Pollick, F.: Cognitive Psychology, Chapter 4, 5, 6, 7.

Eksamenskrav:

A well-defined problem lends itself to explicit mental modelling, involving working memory for the actual modelling, episodic memory for providing past events that give examples of actions and outcomes, and semantic memory for relevant facts. The importance of different subsystems of working memory depends on the nature of the problem. Chess would need the visuo-spatial sketchpad. Telling a story would need the phonological loop. Gilhooly et al. do not mention other modality-linked subsystems, so students may get stuck when asking whether any working memory subsystem can help what combining some ingredients would taste like. I did mention that there is evidence for systems beyond the visuo-spatial and auditory, but that is not in the written pensum.

Even if the problem is both knowledge-lean and extremely simple, non-declarative memories can help. Habitual sequences of actions form chunks that reduce working memory load. The stimulus-outcome associations of classical conditioning can provide implicit expectations of what happens in various situations, and gut feelings and intuitions. (Note that the book correctly separates habits from classical conditioning in Figure 7.4., but gives examples of classical conditioning under the heading of habit learning. That may lead to some confusion, which we must excuse.) Perceptual learning helps to distinguish stimuli that should be responded to differently.

A problem can become more knowledge-rich in an obvious and direct way if it requires more knowledge from semantic memory, perhaps even knowledge rare enough to be called expert knowledge. It is rather less obvious that a problem can become effectively knowledge-rich simply because there are so many possible ways to combine pieces of information that it is impossible to search through all combinations. The number of combinations may be reduced through chunking, which in turn depends on previously learned habits or previously acquired semantic information. Intuitions acquired through

classical conditioning can prune the search tree by making some possibilities appear promising, others bad.

Ill-defined problems, lacking any or all of clear initial state, clear action-outcome correlations, or clearly defined goal states, are difficult to solve through explicit modelling. Intuitions acquired through classical conditioning are likely to be more important in selecting possible actions. Working memory could still be important in tracking the outcomes of trial and error exploration, but habit learning and new classical conditioning could also contribute by gradually favouring actions that produce more favourable outcomes. The use of analogy might help, though the book pretty much ignores that subject.

The more knowledge-rich a problem becomes, the more important past habits, intuitions and knowledge become. Thus, a composer might work completely intuitively, but may also benefit from knowing a great deal of music theory.

Note that this question asks students to apply knowledge, not merely reproduce it, and that the book is a bit thin on what the various memory systems are good for. Realising that pretty much all the memory systems mentioned in the book can be involved, and how, is likely not trivial. It is quite possible that even good students do not mention all of the above, and we must make allowances accordingly. The emphasis is as much on sound reasoning as on reproducing facts.

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