

# **Multimodal Perception and Cognition Examination**

**Medialogy 7th Semester, Aalborg and Esbjerg**

**Monday 9 January 2012, 09.00 - 12.00**

## **Instructions and information**

- There are 10 questions and you should attempt to answer all of them.
- You are not allowed to bring any written material or electronic devices into the examination room.
- You have 3 hours to complete the examination.
- The maximum number of marks for each question is 10. You must get at least 50 marks in total to pass the examination.
- Your mark on this examination is weighted equally with your mark for the mini-project in determining your overall grade for the course.
- You are advised to spend about 15 minutes on each question.

**DO NOT TURN OVER UNTIL TOLD TO DO SO!**

## Questions

1

Name and briefly describe the four main approaches to human cognition. For each approach, give at least one example of a study that has adopted it. Identify important strengths and limitations of each approach.

2

Name and briefly describe four techniques for studying the brain. Compare the four approaches in terms of temporal and spatial resolution.

3

Describe the phenomenon of blindsight, explaining the difference between striate and non-striate vision. What explanations have been proposed for blindsight?

4

Explain what is meant by the *tilt after-effect*. Outline a neural explanation for this effect. What is the *distance paradox* and how does it relate to the tilt after-effect?

5

In the context of motion perception, explain, with examples, what is meant by the following terms:

- *apparent motion*
- *illusory motion*
- *vection*

6

In the context of sound, what is meant by the *impulse response* of a filter? What is a *ringing response*? How do the time resolution and frequency resolution of a bandpass filter vary with bandwidth? How can it be that the inner ear achieves both good time resolution and good frequency resolution?

7

Explain what is meant by *auditory stream segregation*. How can a listener's ability to recognize patterns in sound be used to determine how a sound is segregated into streams?

8

In the context of attention, explain, referring to relevant experimental work, what is meant by the following terms:

- *echoic memory*
- *iconic memory*
- *partial report superiority effect*

9

In the context of object recognition, what is the *Law of Prägnanz*? Name, state, and briefly explain, with examples, the four other Gestalt laws of perceptual segregation.

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**10**

In the context of consciousness, explain, with examples, what is meant by the following terms:

- *dualism*
- *monism*
- *functionalism*
- *epiphenomenalism*

END OF EXAMINATION