

Instituto Superior Técnico

Programação Avançada

Primeiro Teste – 22/4/2015

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NSTITUTO UPERIOR ÉCNICO	Nome:			
Write your number or can be in Portuguese or E answer. You can use the The grade for each question 1. (1.0) What is the differ	n every page. Your answers standish. In case of doubt, make other side of the page for dragon is written in parenthesis. Correct between a Computation	hould not be longer to the reasonable assuments. The exam has 3 Good luck.	than the available space, an ptions, and explain them i pages and the duration is 1	n your I hour.
Explain.	•	·		
2. (1.0) In Java, several	concepts, such as classes, m	nethods, and fields,	, are reified. Why? Explai	n.
	not only <i>annotations</i> but als ain and provide examples.	o meta-annotations.	What is the purpose of	meta-
3. (1.0) Java supports r	not only <i>annotations</i> but als			

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7. (1.0) Consider a programming language supporting metaclasses. Describe possible uses for methods defined at the metaclass level.
8. (1.0) In CLOS, generic functions can be specialized not only on the types of the arguments, but also on specific arguments. This is known as <i>instance specialization</i> . Describe a situation where instance specialization is useful.
9. (1.0) During this course, you had to implement a boxing/unboxing profiler for Java. Explain your
implementation.