

**CSC7003 : Software Engineering Exam (3<sup>rd</sup> February 2011)**  
**Dr J Paul Gibson**

**Answer only 1 question** – if you answer more than 1 question then only the first answer will be evaluated and awarded a mark. (Note: in the actual exam you will have a choice between 5 questions)

You are allowed access to any secondary material (notes/books/web). Please correctly cite/reference any material that you use in your answer that is not your own work. (Plagiarism of secondary material will be punished)

You have 3 hours for the exam (but the deadline is flexible, if you require some more time). You should not need more than 2 hours to answer a question. Please submit your answer electronically as a .pdf (or plain text).

**Question 1:**

Last year, in 2010, saw the death of 2 pioneers in computing, namely: Watts Humphrey and Maurice Wilkes. Given their different experiences and skills, which of the two would have been the most help to you during your project team development of the 15-puzzle? Explain your decision within the context of having either one of the 2 men as a consultant for any single day during the project.

**Question 2:**

Consider all the “additional reading links” at the CSC7003 module web site. Which one of the papers referenced did you find the most insightful with respect to addressing one, or more, of your personal weaknesses as a software engineer?

**Question 3:**

In an often cited article written by Karen Frenkel in 1990, she states her concerns regarding the lack of women in computing: “*As it is, one wonders how many ideas, that could have been contributed by female talent, will never surface to enrich academic computer science*” [1, p45]. Given the time that has passed since this article was first published, has this concern been addressed? In particular, comment on the contribution of “female talent” in the domain of software engineering in the last 20 years.

(Note: a copy of this article is downloadable from the module web site :  
<http://www-public.int-evry.fr/~gibson/Teaching/CSC7003/ReadingMaterial/Frenkel90.pdf> )

**Question 4:**

Imagine that you are able to invite any software engineer (dead or alive) to give a seminar to you and your friends/colleagues/family. Who would you invite and what would you ask them to talk about? Please justify your answers.

**Question 5:**

Kent Beck says, with respect to agile development (in his well known book **Extreme Programming Explained**): “*Optimism is an occupational hazard of programming, feedback is the treatment.*” Do you think that Agile is the best software development process with respect to providing quality feedback to the developers?

**References**

[1] Karen A. Frenkel. 1990. *Women and computing*. Commun. ACM 33, 11 (November 1990), 34-46. DOI=10.1145/92755.92756 <http://doi.acm.org/10.1145/92755.92756>