

COMPUTER SCIENCE TRIPOS Part IB – 2017 – Paper 3

8 Software Engineering (RJA)

- (a) Describe the main processes in a modern software development environment, and the tools used to support them. [6 marks]
- (b) If the software were safety-critical, such as the control software for a car's anti-lock braking system (ABS), which other processes might be added? [4 marks]
- (c) You are developing control software for a car whose latest model will have a network connection. Software upgrades will be delivered over the air rather than at service visits, so that any security vulnerabilities can be patched quickly. This in turn means that you will have to provide patches, to deal with both security and safety issues for the next 25 years. Discuss how this is likely to affect your development process, and the implications it will have for costs. [10 marks]