

Software Engineering Comprehensive Exam

There are *SIX* questions, answer *ANY FOUR* questions. All questions have the same available marks. You have one hour, thirty minutes to complete the exam. Notes of any kind are forbidden but you may use standard calculators if required. Answer on the sheets provided. If you need more pages, signal this to the instructor(s).

Put your Student ID number in the space below and await the instructor to start the exam

ID Number: _____

Question 1

Compare and contrast two lifecycle models. What advantages or disadvantages does each model have over the other?

Question 2

A basic algorithmic estimation model is $\text{Effort} = A \times \text{Size}^B \times M$. What are the variables A, B and M used for? What is one of the major problems of estimation and how is it affected over a project's lifetime

Question 3

What is the most expensive phase in software engineering? Justify your answer

Question 4

Define the characteristics of a “good test” and a “bad test.” Explain the differences, why good is good and why bad is bad. Provide and justify a definition of a good tester.

Question 5

Explain the difference between “Black Box” and “White Box” testing. Explain the advantages and disadvantages of each.

Question 6

Describe a process for performing a software review. Clearly identify each step, and describe the purpose of each step.