

Books, watches, notes or cell phones are **not** allowed. The **only** calculators allowed are the Sharp EL-531***. You **must** show all your work, the correct answer is worth 1 mark the remaining marks are given for the work.

Question 1. (5 marks) Evaluate the integral

$$\int x^2 \arctan x \, dx$$

Question 2. (5 marks) Evaluate the integral

$$\int \frac{1}{x^3 - 1} dx$$