(45 Marks)

(a) John and Mary have decided to start saving to buy a house.

Mary's parents offer to give them €10,000 now or to give it to them in a few years when they purchase a house.

Explain why they should take the money now, referring to the concept of the time value of money in your answer.

They find an investment which pays 8% AER for regular savings.

(b) What is the equivalent monthly compound interest rate as 8% AER?
Give your answer correct to 4 decimal places.

(c) John and Mary start saving. At the end of each month they deposit €500 into an account that pays an AER of 8% compounded monthly.
What will be the value of their savings after 5 years?
Give your answer correct to the nearest euro.

(d) John and Mary are also saving to purchase a car. They wish to have €5,000 in their savings account to make this purchase in three years' time. This savings account also has an AER of 8%. How much do they have to deposit into their account at the end of each month in order to have €5,000 after three years?
Give your answer correct to the nearest cent.