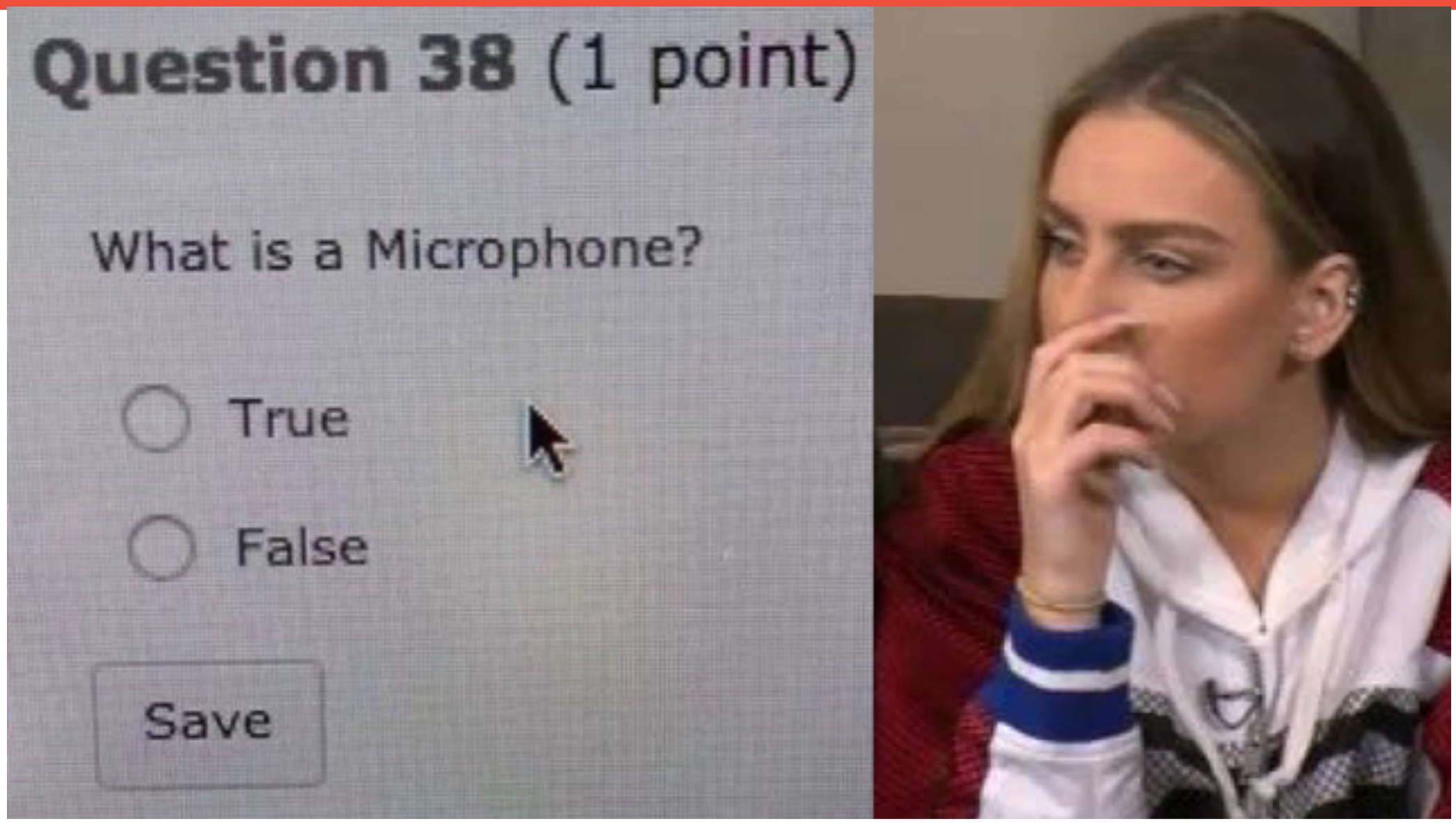
Mock exam and end-course REVISION



TODAY'S GOALS

Familiarise with the exam style (to reduce stress and surprise)

Understand what **HOW** to answer questions

Learn some other tricks to do better at exams

INTRODUCTION

Based on your analysis, DBBA Investments built a new international fund, **NetFund**, which they want to promote.

They asked you to develop a new marketing campaign to publicise NetFund, which will be run on a **single social media platform** to begin with.

INTRODUCTION

PRO TIP: MOST STUDENTS LOSE (MANY) MARKS BECAUSE THEY DO NOT READ WELL THE ASSIGNMENT. READ IT AT LEAST TWICE AND GO BACK TO READ IT AGAIN ANY TIME YOU ARE IN DOUBT.

Assumptions

You can assume the following:

- All stocks have the same expected yearly return **s**.

- Stocks are risky and therefore there is a probability **p** that their return will be **−s** instead.

- All bonds have the same expected yearly return **b**.

- Bonds cannot be sold before maturity

- The time horizon for the investments is T=10 years.

QUESTION 1

Your first task is to maximise the number of people who **are aware** of NetFund.

QUESTION 1

i. Among those seen in class, which model would you use to describe this diffusion process?

QUESTION 1

ii) Assume you have a **limited budget**. Choose a **simple heuristic** strategy to target some people in the social media platform.

Discuss why this would work in this context, and compare it with another strategy you think would not perform as well.

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QUESTION 1

iii) Now, assume that users can either choose NetFund or EvilFund, the fund run by DBBA Investment's competitor.

Would you change the way you model the diffusion process and the targeting strategy?

QUESTION 1

PRO TIP: DON'T JUMP DIRECTLY ON WRITING THE ANSWER. THINK ABOUT THE MODEL AS A WHOLE.

QUESTION 2

Thanks to your marketing strategy, DBBA Investments is getting many new customers.

DBBA Investments currently provides two options for their customers to invest in: NetFund, a highly diversified fund with a long-term expected return of **10%** per annum, and EcoFund, a fund with a long-term expected return of **7%** per annum, but composed only of green companies.

QUESTION 2

Right now, 82% of customers invest in NetFund. However, DBBA Investments care about the environment, and would like to nudge their customers towards EcoFund.

QUESTION 2

i. Propose a strategy to nudge customers towards investing in EcoFund.

QUESTION 2

ii. Design a simple agent-based model to test the strategy you proposed in the previous question.

First design the agents. **{3 marks}**

QUESTION 2

PRO TIP: IF IT LOOKS LIKE A LOT OF WORK, BUT ONLY GIVES A FEW MARKS, IT PROBABLY ISN'T A LOT OF WORK

QUESTION 2

iii) Second, propose a way to calibrate/validate the model. {3 marks}