

Macro Module 11 Unemployment rate practice exam questions

- The labor market is at the natural unemployment rate in December 20XX, with a job finding rate of 7.63% per month and a job separation rate of 1.61% per month.
- On January 1, 20XX+1, with the onset of a recession, the job finding rate changes to 6.68% per month, and the job separation rate does not change.

Question 11.1: Natural unemployment rate

What is the natural unemployment rate in December 20XX?

Answer 11.1: $1.61\% / (7.63\% + 1.61\%) = 17.42\%$

(natural unemployment rate = job separation rate / (job finding rate + job separation rate))

Question 11.2: Unemployment rate after one month

What is unemployment rate on February 1, 20XX+1, after one month of the new job finding rate?

Answer 11.2: $17.42\% \times (1 - 6.68\%) + (1 - 17.42\%) \times 1.61\% = 17.59\%$

(Between January 1, 20XX+1, and February 1, 20XX+1, $17.42\% \times (1 - 6.68\%)$ unemployed workers remain without jobs and $(1 - 17.42\%) \times 1.61\%$ employed workers lose their jobs.)

Question 11.3: Natural unemployment rate

What is the natural unemployment rate in February 20XX+1?

Answer 11.3: $1.61\% / (6.68\% + 1.61\%) = 19.42\%$

(natural unemployment rate = job separation rate / (job finding rate + job separation rate))