ECON 2080, part 1
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Quiz 1: Matching Function

Question A

Suppose a country has 200 million people, of whom 50 million are retired, 30 million are above 16 and at university, 70 million are below 16, 10 million are in the armed forces, 30 million are working, and 10 million are not working but do not want a job. What is the labor-force participation rate?

1. 10%
2. 25%
3. 30%
4. 50%
5. 60%
6. 70%

Question B

Since the 1950s in the US, the labor force participation rate has been

1. Increasing until today.
2. Decreasing until today.
3. Decreasing for men and increasing for women.
4. Increasing for men and decreasing for women.
5. Increasing until 2000 and decreasing since then.
6. Decreasing until 2000 and increasing since then.

Question C

What was the highest unemployment rate in the US between 1951 and 2019?

1. About 25%
2. About 15%
3. About 11%
4. About 8%
5. About 6%

Question D

In the United States, the average amount of time people spend unemployed is approximately

1. Between zero and one month
2. About two months
3. About four months
4. About six months
5. Greater than twelve months

Question E

Which of these matching functions does not have constant returns to scale?

1. $m(U, V) = a \times U + b \times V$
2. $m(U, V) = U^a \times V^{1-a}$
3. $m(U, V) = [b \times U^a + (1 - b) \times V^a]^{1/a}$
4. $m(U, V) = U \times V$
5. $m(U, V) = \sqrt{U} \times \sqrt{V}$

Question F

What does the Beveridge curve say about the US labor market?

1. That when the unemployment rate is high, the vacancy rate is low.
2. That when the unemployment rate is high, the vacancy rate is high.
3. That unemployed workers and vacant jobs cannot coexist.
4. That on average jobs last a long time.
5. That it takes a long time for unemployed workers to find a job.

Question G

A Cobb-Douglas matching function gives the flow of new worker-firm matches created when they are U unemployment workers and V vacancies: $m = \omega \times U^{\eta} \times V^{1-\eta}$. We define the labor market tightness as $\theta = V/U$. What is the expression for the rate q at which a vacancy is filled?

1. $q(\theta) = \omega \times \theta^{\eta}$
2. $q(\theta) = \omega \times \theta^{1-\eta}$
3. $q(\theta) = \omega \times \theta^{-\eta}$
4. $q(\theta) = \omega \times \eta^{\theta}$
5. $q(\theta) = \theta^{-\eta}$