

**DEPARTMENT OF ECONOMICS, CONCORDIA UNIVERSITY**  
**ECON 304, Fall 2018**  
**Tutorial Problems - Week 3**

**Schedule: Fr 2:45PM - 3:45PM in FG C080 SGW**

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**Tutor: Benjamin Treitz**

## **1- Numerical Application of the DMP theory**

Consider a simple economy with search unemployment. The matching function is given by

$$M = 0.1Q^{1/2}A^{1/2}.$$

The supply curve of the workers is given by

$$\nu(Q) = \sqrt{Q}.$$

Let  $b = 0.4$ ,  $z = 1$ ,  $k = 0.05$  and  $a = 0.5$ , where  $k$  is the cost of creating a vacancy.

- (i) Calculate the market tightness  $j$ . Show your calculation in detail.
- (ii) What is the job-finding probability?
- (iii) How many vacancies are posted in the economy?

## **2- Problem 2 from Chapter 9 in the textbook**

Suppose the government's goal is to reduce the unemployment rate. Some legislators propose the government should give a subsidy  $s$  to any firm that hires a worker. Others argue that it would be more effective to simply pay a any firm that hires a worker. Others argue that it would be more effective to simply pay consumers to stay home rather than search for work; that is, anyone who chooses not to participate in the labour force should receive a payment  $q$ . Which policy is more effective in achieving the government's goal? Explain using the DMP model, with the aid of diagrams. (In your answer, do not concern yourself with how the subsidies from the government are financed.)

## **3- Problem 3 from Chapter 9 in the textbook**

Suppose there is a technological change that reduces the costs of recruiting for firms. Using the DMP model, determine the effects on the unemployment rate, the vacancy rate, the labour force, the number of firms, aggregate output, and labour market tightness. Use diagrams, and explain your results.