

Macro Module 15 Utilization rate practice exam questions

(The attached PDF file has better formatting.)

Question 15.1: Utilization rate of capital

- The real return on capital R/P is 18.78%.
- The depreciation function $\delta(\kappa)$ is $\kappa^2 / 8.64$, where κ is the utilization rate of capital.

What is the optimal utilization rate of capital?

Answer 15.1: maximize $(R/P) \times \kappa - \delta(\kappa) = 18.78\% \times \kappa - \kappa^2 / 8.64$ by setting partial derivative with respect to κ equal to zero: $18.78\% - 2 \kappa / 8.64 = 0 \Rightarrow \kappa = 18.78\% \times 8.64 / 2 = 81.13\%$