14. Adverse selection with more than two types of agents
Assume we have three different types of agents, who only differ in their probability π of suffering a loss L. Repeat your analysis in the Rothschild-Stiglitz framework and show that there are now two inefficient contracts whereas there is still no-distortion at the top! (diagrammatical argumentation is sufficient)

15. Adverse selection: Exclusiveness, Equilibrium-non-existence
The existence of a Rothschild-Stiglitz separating equilibrium hinges on several crucial features. **(i)** Exclusiveness of contracts: Why is it necessary to make the implicit assumption that an insurer can observe the total amount of cover bought by an insured from all insurers? **(ii)** How does an insurance company solve this monitoring problem in the real world? **(iii)** What is the role of the share of high risk types? **(iv)** If the h-types become more risk averse, does this make it more or less likely that a pooling contract undermines the separating contract? **(v)** What if l-types become more risk averse?

16. Moral Hazard: Choice of care
Assume that the loss probability varies continuously with care a: $\pi = \pi(a)$, $\pi'(a) < 0$, $\pi''(a) > 0$.

a) Model the insured's choice of care for a given contract (P, C) with partial insurance.

b) How does optimal care vary with the y, L, P and C?

17. Moral Hazard in insurance markets
Consider an individual who owns a ware house that is subject to a fire danger. If it burns she suffers a damage that is distributed over the range from L_{min} to L_{max} with density $f(L)$. The owner's choice of care affects the probability of the loss while it does not affect its extent. If the owner takes care the probability equals π_e and if she is negligent it equals π_0 where $\pi_0 > \pi_e$ holds. Taking care imposes a cost of $e > 0$ on her. If she is negligent e equals zero. Insurance contracts specify a fair premium P and cover $C(L)$ in case of loss L.

a) Assume the contracts offer complete coverage $C(L) = L$. What will be the results in terms of the insurance policy that is offered and the level of care the warehouse owner will take?

b) Can the warehouse owner be better off if the insurers offered coinsurance $C(L) = \gamma \cdot L$ with $\gamma \in [0, 1]$ than if the insurers offered full coverage? Find the incentive compatibility constraint. Why does the participation contraint automatically hold?

c) Does the result from **b)** hold even for a contract with a deductible $C(L) = \max\{L - D, 0\}$?

d) Do your results change if we assume that the owner can no longer affect the loss probability but the loss size?

Thank you for your attention and good luck for the exam!