Examen Incentives & Behavior Januari 2022

Question 1 about entering the market or not; which statement is true

P1/P2	E	N
E	-1, -1	2, 0
N	0, 2	0, 0

c) The chance for a player to not enter the market is ⅓ 2x
d) The chance that both players won't enter is 4/9 (I don't remember the phrasing anymore, it's if both players enter 4/9)

Q2
Q3
Q4
Theory question about how prospect theory explains bonds vs stocks. What is not true?
You have to be extremely risk averseq to invest in bonds 1x
(I believe you'd always put money in bonds, how much depends on the timehorizon)

Q5
time preference with u(c)=sqrt(w) y=(0,w,0) and ct + st ≤ yt + (1+r)st−1
one of the expressions was incorrect
d) s2=0

Q6
Time inconsistent consumer B. What's true
one of the 2 expressions was correct

- beta doesn't affect decisions
- At t = 2 consumer will consume more than would've wanted
- 2 Expressions for c1 and …

Q7
Indicate what's not true

- the lower p, the higher the fixed fee a sophisticated consumer is willing to pay
- It's optimal to price below mc when consumer is naive/sophisticated (these 2 were definitely true)
- for a given p, naive customer is willing to pay a lower fixed fee than sophisticated one

Q9
If the likelihood in period i is lower than the likelihood in j, the wage in period i is higher than wage j. This sounded true assuming that i<j.

Q10
False: bothe limited liability constraints are limiting (only one)

First open question:
Extensive form
Top node: player one decides to enter (E) or not (O)
Second level: player two decides to ask for a high (H) or low price (L).
Payoffs:
O - H : 0,4
O - L : 0,2
E - H: 1, 1
E - L : -1, -1

- Write down the possible strategies of each player
- Write down the normal form and indicate best responses
- Determine SPNE (I believe E,HH ?)

2nd open question
Student has utility function u(x) - 1/2e². E is the effort the student has to do while studying for the exam and x is the obtained grade. The grade is increasing in effort and decreasing in difficulty of the exam, h. x = e/h. Also, the student is risk-averse and utility function has the following form v(x-r) … r is the reference grade the student would like to obtain.

1) write down the max. problem (3p)
   max v(e/h-r) - 1/2e²
2) If lambda = 1, determine the optimal level of e
   e/h-r-1/2e² FOC: 0= 1/h-e so e=1/h
3) How does an increase in difficulty h affect e? Explain the intuition
   $\frac{\delta e}{\delta h}$=-1/h²
4) Now say lambda >= 1. Determine the optimal profit level for when h >=sqrt(1/r) or h<=sqrt(lambda/r)

5) Again optimal level, but at =
6) How does optimal effort level change with h now. What's different than in question 3.