Ex/M. Phil.ECO/1.11.2022(S)

Jadavpur University
Department of Economics

M.Phil. Course work in Economics Supplementary Examination, 2022

1st Year, 1st Semester

Paper: Advanced Microeconomics

Time: Two Hours **Total Marks: 30**

Answer any two questions

1. Consider the game below, which shows the payoff of the William sister in a game of tennis, where they are trying to come up with their equilibrium strategies at one time point.

	Venus		
		Fore arm	Back Arm
Serena	Fore arm	90,10	20,80
	Back arm	30,70	60,40

a) Is there any pure strategy Nash Equilibrium? If not, then find the mixed strategy Nash Equilibrium. (5+10)

2. Define risk averse individual. Draw the utility function of a risk averse individual over a lottery (1000, 2000, ½) and find the certainty equivalent and risk premium assuming the utility function as $u(w) = \sqrt{w}$. Calculate the difference in value for certainty equivalent and risk premium when the individual's utility function is $u(w) = w^2$. 5+5+5=15

3. Write down the difference between the following (**any 5**):
   a) Normal form representation and extensive form representation
   b) Incentive compatibility constraint and participation constraint
   c) Pure Strategy Nash Equilibrium and Dominant Strategy Nash Equilibrium
   d) Separating and Pooling equilibrium
   e) Singleton and non-singleton node
   f) Arrow Pratt absolute risk aversion and Arrow Pratt relative risk aversion

(3x5=15)