BACHELOR OF ARTS EXAMINATION, 2022

(3rd Year, 6th Semester)

ECONOMICS

TOPICS IN MICROECONOMICS - II

Full Marks: 30

Time: Two Hours

Attempt question no. 1 and any one from the rest:

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1. (a). Suppose there are two gambles. In gamble 1 an individual has to pay Rs. 100 in order to win Rs. 500 with probability $\frac{1}{2}$ or win Rs. 100 with probability $\frac{1}{2}$. In gamble 2 an individual has to pay Rs. 100 for the chance of winning Rs. 325 with probability $\frac{1}{2}$ and Rs. 136 with probability $\frac{1}{2}$. Suppose there are two individuals. Both are expected utility maximizers. Individual A has Bernoulli utility function $u(w) = \sqrt{w}$ and Individual B has Bernoulli utility function $u(w) = w$. Check who prefers which gamble?

(10)

(b). Consider a person (an expected utility maximizer) with a Bernoulli utility function given by $u(z) = \sqrt{z}$. Suppose that the person engages in a risky venture which leaves him with either Rs. 81 or Rs. 25 with equal probability. What is the certainty equivalent of this business venture? What is the risk premium?

(3+2)

(2). (a). Consider Cournot competition by firms 1 and 2; market demand (for a homogeneous product) is assumed to be downward sloping, linear (with intercept 1) and firm i has constant unit cost of production c_i with, $c_1 > c_2 > 0$. Now suppose that firm 1's output is taxed and firm 2's output is subsidized, both at the same rate, t, **per unit**. What will be its implication for the net tax collection of the government?

(10)

[Turn over

(B). Explain whether the following statement is true, false or uncertain:

"An incomplete information game must have imperfect information as well" (5)

(3). (a). Consider 2 individuals 1 and 2 in an economy who can contribute to the production of a public good. Contribution is a 0-1 decision, 1 implies that the individual contributes and 0 otherwise. Public good is provided if at-least one individual contributes. The benefit from public good provision is normalized to 1 and this is common knowledge. Assume both individuals to be symmetric. The cost of contribution for both individuals is private information to both individuals and the possible costs are distributed **uniformly** within the range $[0,4]$. Write the payoffs of the game clearly. Show that both individuals will contribute if and only if their costs are sufficiently low and find that threshold value of cost below which both will contribute? (2+8)

(b). Explain the difference between 'Hidden Action' and 'Hidden Information'? (5)