

**MASTER OF ARTS EXAMINATION, 2024**

(2nd Year, 1st Semester, Supplementary)

**ECONOMICS****[ MICROECONOMICS II ]**

Time : Two hours

Full Marks : 30

**Attempt Question no. 1 and any one from the rest:**

(1). (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?

(9)

(b). There are three voters 1, 2, 3 who have to vote for either candidate A or candidate B. The candidate who get at least two votes wins the election. If A wins, all voters get a pay-off of 1; if B is elected, all of them get 0. Which of the following strategy profiles constitute a Nash equilibrium? (Explain briefly for each case)

- i. Voter 1 votes for B while 2 and 3 vote for A.
- ii. Voter 2 votes for A while the other two vote for B.
- iii. All three voters vote for A.
- iv. All three voters vote for B.

(1.5×4)

(2). (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

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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 briefly the following concepts:

(i). Degenerate Mixed Strategy (ii). Hidden Action.

(2.5+2.5)

(3). Write short notes on the following:

(a) Hidden action (b). Type-revealing Mechanism (c). Asymmetric Information.

(5+5+5)