MASTER OF ARTS EXAMINATION, 2017
(1st Year, 1st Semester)
ECONOMICS
MICROECONOMICS-1

Full Marks: 30

Time: Two Hours

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

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 von Neumann- Morgenstern utility function $u(w) = \sqrt{w}$ and Individual B has von Neumann- Morgenstern utility function $u(w) = w$. Check who prefers which gamble?

(9)

(b). Consider the technology described by $y = 0$ for $x \leq 1$ and $y = log x$ for $x > 1$. Find the profit function for this technology?

(6)

(2). (a). A firm has a production function given by $(x_1, x_2, x_3, x_4) = min\{2x_1 + x_2, x_3 + 2x_4\}$. Find the cost function for this technology? (6)

(b). A consumer has a direct utility function $u(x_1, x_2) = \max\{x_1, x_2\}$.

(a). What is the consumer's demand function for good 1?

(b). Derive the consumer's indirect utility function?

(c). What will be his/her expenditure function? (4+2+3)

(3). A firm has two plants with cost functions $c_1(y_1) = 4\sqrt{y_1}$ and $c_2(y_2) = 2\sqrt{y_2}$. What is the cost of producing an output y?

(6)

(b). Explain true, false or uncertain:

(i). Consider a 2 factor 2 good production model with fixed coefficient technology. Then if the factor endowment ratio is equal to the relative factor intensity ratio of good 2 then good 2 shouldn't be produced.

(ii). An offer curve should always pass through the Walrasian equilibrium point.

(3+3)

(c). Explain the concept of 'Compound Lotteries'. (3)