EC 11. Homework #1

Please hand in the homework to your TA. The worth of each subsection is indicated after the question. Read Chapters 1-3 of the text.

1. Explain the following terms:
   (a) Opportunity Cost (5)
   (b) Law of Diminishing Returns (5)
   (c) Production Possibility Set (5)
   (d) Law of Demand (5)

2. Consider a consumer with preferences defined over two goods with preferences $\succeq$, where strict preference is indicated by $>$ and indifference indicated by $\sim$. Preferences are; Complete, that is for points $a, b$ either $a \succeq b$ or $b \succeq a$ or both, Transitive, that is for all $a, b, c$ if $a \succeq b$ and $b \succeq c$ then $a \succeq c$ and Monotonic, that is if $a >> b$ then $a \succ b$. Show that the utility function derived in class, that is for each point $(x, y) \in \mathbb{R}_+^2$ the function defined by $u(x, y) = |\alpha|$, where $(x, y) \sim (\alpha, \alpha)$ (i.e., a point of equal coordinates indifferent to $(x, y)$), does indeed represent preferences. That is:
   (a) $u(x, y) > u(x', y')$ if and only if $(x, y) \succ (x', y')$.
   and
   (b) $u(x, y) = u(x', y')$ if and only if $(x, y) \sim (x', y')$. (25)

3. Discuss a non-market institution of your choice, preferable one that has been in the news recently. Why do think a non-market institution rather than a market was used in this case? (25)