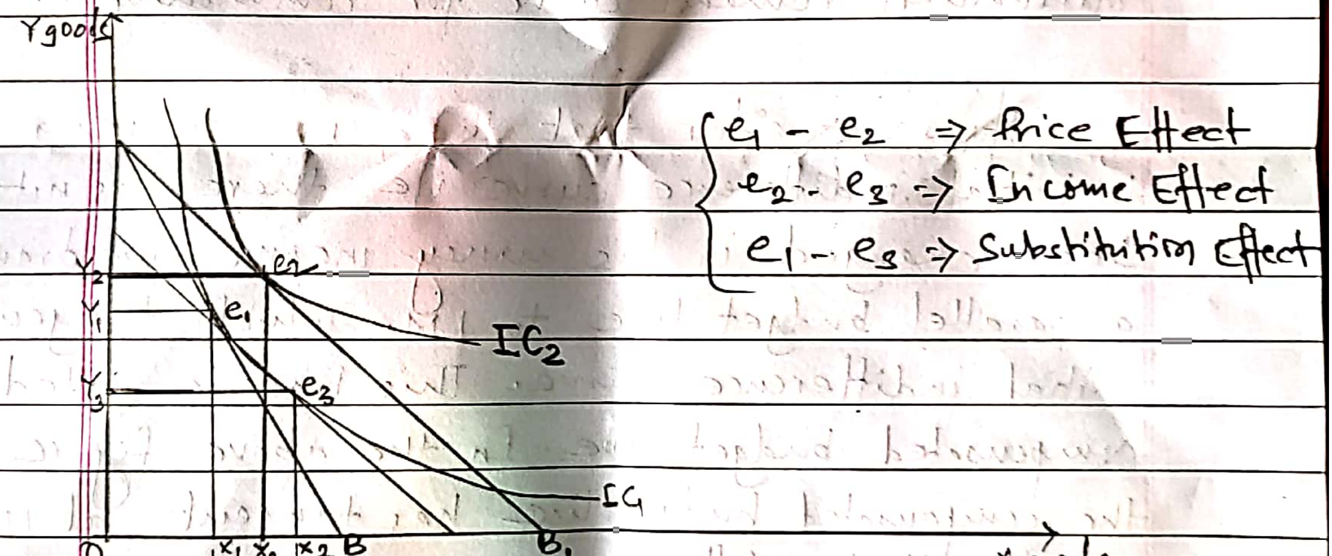
(1)

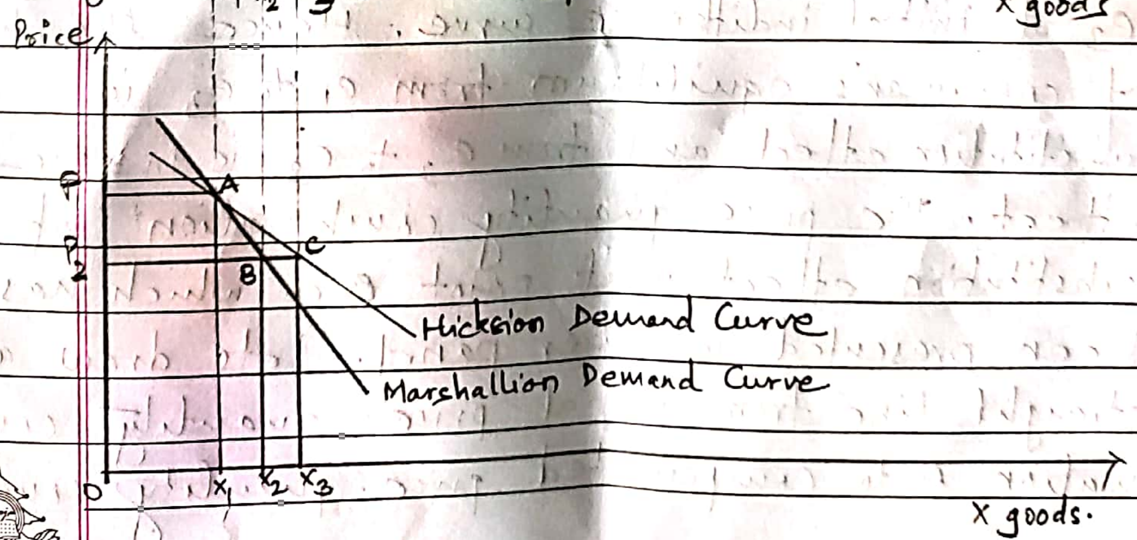
(a) Derive Marshallian and Hicksian demand curve for inferior good.

(b) How the price effect is decomposed into income effect and substitution effect in the case of inferior good.



Inferior goods are those goods, for which the decrease in price donot increase in demand as in the case of normal goods. It means increase in demand due to decrease in price is relatively poor. Or instead of increase in demand of only inferior goods, the consumer prefers to buy another good because of his increased purchasing power. Precisely, it can be said that, in the case of inferior good price effect is less than substitution effect and income effect is negative.



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In the above figure, due to decrease in price of good x, the budget line has shifted to $AB_1$ from AB. The demand for good x has been increased and the consumer has attained new equilibrium point at $e_2$ at upper tangent point of indifference curve and new budget line. The price and commodity combination has shifted from $e_1$ to $e_2$ which has been illustrated in lower panel. If we draw a straight line passing through we get Marshallian demand curve for commodity x.

If we consider that the consumer remains in initial indifference curve i.e there has not been changed in his money income, we draw a parallel budget line to LM which tangents initial indifference curve. This line is called compensated budget line. In the above figure the compensated budget line has tangent at point $e_3$ of initial indifference curve. Hence the changes of consumer's equilibrium from $e_1$ to $e_3$ is substitution effect and from $e_2$ to $e_3$ is income effect. The price quantity combination of substitution effect is at point C which has been presented in lower panel. Lets draw a straight line from initial price, quantity combination A to compensated price-quantity combi-

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-nation c, than we get Hicksian or compensated demand curve. In the above figure, we can see that Hicksian demand curve is more flatter than Marshallian demand curve which is just opposite of Normal good case.