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(a) Explain the meaning of *zero-sum* in game theory. [2]

Game theory is a discipline that with the help of mathematical examples explains how people and entities (firms etc) interact in real lives. Game theory is used to explain the concept of collusion in Oligopoly markets.

Zero-sum game is when in a certain situation one participant's loss is another participant's benefit. When 2 presidential candidates compete so if more people are inclined towards one candidate then it obviously means less votes for the other candidate.

Zero sum game happens in Oligopoly markets when 2 firms are *not colluding* and therefore if one firm charges lower prices then it would attract more customers from the other firm.

(b) Use the information to explain how external economies of scale develop. Show, with the aid of a diagram, how this would affect a firm's average costs. [5]

There are 2 types of economies of scale namely internal and external economies.

Internal economies of scale is when a firm's average total cost of production decreases due to its own increase in size / scale.

This happens because of following reasons:

1. Bulk Buying economies
2. Technical economies
3. Managerial economies
4. Financial economies
5. Risk bearing economies

External economies of scale is when d***ue to increase in the size of the industry*** the firm's average cost of production decreases.

Agglomeration economies of scale: is when similar firms like IT firms locate in a certain vicinity of a country and as a result they attract more skilled labor related to their work, more firms that provide them raw material / components or support services etc and infrastructure develops in that area to support the growth of that sector.

(c) There is a fall in demand for the product of a geographically concentrated industry. Analyse the economic implications of this for the area where the industry is located. [6]

Firstly, reduced demand for the product would mean lower demand for the labor which could cause significant rise in unemployment rates. With unemployment rates in a certain geographical location like a city or town would mean that people might start migrating out of the city because of no other firms or companies to absorb the large number of unemployed people.

Decrease in per capita income of the city would mean lower affordability and other firms present in the area might also reduce their operations since people can’t afford their products.

The government might need to retrain the people who lost jobs causing additional burden on government finances. And government would also need to provide them financial assistance like transfer payments and so on.

(d) Consider how the negative externalities from concentrated industrial production can be reduced. [7]

Imposing taxes, (can make a graph showing a leftward shift in supply when government imposes taxes)

Government assigning production quotas to manufacturers like the limit on how much they can produce can pollute