ANSWER PATTERN

1. What is a production function? How does a long-run production function differ from a short-run production function? (**2 Marks**)

A production function represents how inputs are transformed into outputs by a firm. In particular, a production function describes the maximum output that a firm can produce for each specified combination of inputs. In the short run, one or more factors of production cannot be changed, so a short-run production function tells us the maximum output that can be produced with different amounts of the variable inputs, holding fixed inputs constant. In the long-run production function, all inputs are variable.

2. What is the difference between a cooperative and a noncooperative game? Give an example of each. **(2 Marks**)

In a noncooperative game the players do not formally communicate in an effort to coordinate their actions. They are aware of one another's existence, but act independently. The primary difference between a cooperative and a noncooperative game is that a binding contract, i.e., an agreement between the parties to which both parties must adhere, is possible in the former, but not in the latter. An example of a cooperative game would be a formal cartel agreement, such as OPEC, or a joint venture. An example of a noncooperative game would be a race in research and development to obtain a patent.

3. Define elasticity. What are the types of price elasticity? **(5 marks or more)**

Give definition.

State the formula

Describe the types of elasticity and draw the graphs

Write an example for each.

4. Describe the theory of short run production. **(5 marks or more)**

Describe the short run law of production

Define three stages

Explain the reasons for three stages

Show them graphically.

For all numerical questions, all steps should be written along with the final answer.