

Indian Institute of Technology Patna

End Semester Examination 2013

HS 201: Introductory Microeconomics

Time: 3 hours

Marks 50

Answer all the questions

1. What are the distinguishing features of a 'pure public good'? Give examples. Why is pollution an example of market failure? Use a diagram to illustrate your answer.

4+6=10 Marks

2. A. Why do some oligopolistic firms engage in non-price rather than price competition?

B. A survey among 200 passengers on an aircraft reveals that people might have paid 50 different prices. Explain price differentiation in this particular case through a diagram.

4+6=10 Marks

3. Each questions from 3 A to 3 E carry 2 marks. Write your answer in 50 words on each.

2x5=10 marks

A. Fill in the gaps in the table below:

Quantity of Variable Input	Total Output	Marginal Product of Variable Input	Average Product of Variable Input
0	0		
1	225		
2	375		
3	900		
4	1140		
5	1365		
6	1350		

B. The marginal product of labor in the production of computer chips is 50 chips per hour. The marginal rate of technical substitution of hours of labor for hours of machine-capital is $1/4$. What is the marginal product of capital?

C. A new movie is released after having been heavily promoted to teenagers. On the first night, the tickets sell out and there are still teenagers waiting outside theaters, desperate to see the movie and unable to get a ticket. Is this market in equilibrium? Explain.

- D. Suggest a possible exception to the "law of demand," in which people buy less of a good as its price increases.
- E. Name five major nonprice determinants of supply, for a producing business.
4. Answer any five questions. You may also make a diagram to answer your questions. While answering you should write not more than 50 words for each question. Each question from 4 A to 4 F carry 2 marks.

2X5=10 Marks

- A. Describe one way in which monopolistically competitive firms work to protect their "miniature monopoly".
- B. List three conditions of the ideal market structure of monopoly.
- C. Briefly describe the pros and cons of offering patents on new drugs.
- D. Briefly explain how monopolistic competition differs from perfect competition.
- E. Describe the conditions of the ideal market structure of oligopoly.
- F. Negative v. Positive externalities*
5. A shoe factory has 500 employees and produces a thousand pairs of shoes per hour.
- A. What is the shoe factory's productivity per worker per hour? **2 Marks**
- B. The factory hires one new worker. Now, the factory produces 1,002 shoes per hour. Then the factory hires one more worker. Production rises to 1,004 per hour. Does the factory have diminishing, constant, or increasing marginal returns at this level of production? **2 Marks**
- C. Graph the production function (total product curve) of the shoe factory at these levels of production, carefully labeling all lines and points. **3 Marks**
- D. Briefly define the concept of an "indifference curve," and illustrate it with an example. **3 Marks**