

## SEMESTER FALL 2015

### MANAGERIAL ECONOMICS (ECO404)

#### ASSIGNMENT No. 02

**DUE DATE:**

Feb 9, 2016

**MARKS: 15**

**PROBLEM # 1:**

Maximize Profit ( $\pi$ ) =  $14X + 9Y$

Subject to the following constraints:

$$4X + 2Y + SA = 30$$

$$1X + 1Y + SB = 20$$

$$3Y + SC = 31$$

The corner points are given as:

Corner points	X	Y
A	6	0
B	5	2
C	3	4
D	0	6

From all this information, algebraically solve the linear programming problem while finding the profit (Rs.) level at each point. Also indicate profit maximizing corner point.

(Marks: 4 + 1)

**PROBLEM # 2:**

The Water and Power Development Authority (WAPDA) has recently published the following estimates of demand and supply relations for electricity:

$$Q_D = 70,000 - 20,000P$$

$$Q_S = 30,000P$$

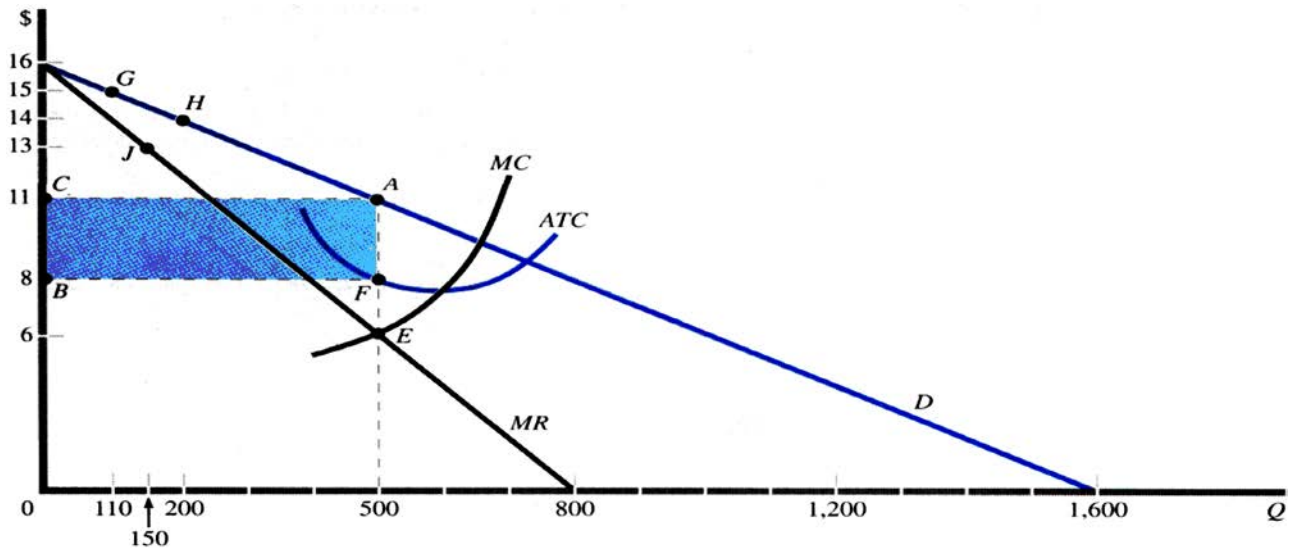
a) Calculate the perfectly competitive industry equilibrium price/output combination.

b) Assume that the industry output is organized into a cartel. Calculate the industry price/output combination that will maximize profits for cartel members. (Note: As a cartel, industry  $MR=P=3.5 - 0.0001Q$  and  $MC=P=0.00003Q$ )

(Marks: 2.5 + 2.5)

**PROBLEM # 3:**

Following diagram shows the short run price and output determination under monopoly.



From the above diagram indicate profit maximizing output level, market price and average cost at that level..

(Marks: 2 + 3)

**IMPORTANT NOTE:**

24 hours extra / grace period after the due date usually available to overcome uploading difficulties. This extra time should only be used to meet the emergencies and above mentioned due dates should always be treated as final to avoid any inconvenience

**OTHER IMPORTANT INSTRUCTIONS:**

**DEADLINE:**

- Make sure to upload the solution file before the due date on VULMS.
- Any submission made via email after the due date will not be accepted.

**FORMATTING GUIDELINES:**

- Use the font style “Times New Roman” or “Arial” and font size “12”.
- It is advised to compose your document in MS-Word format.
- You may also compose your assignment in Open Office format.
- Use black and blue font colors only.

## **RULES FOR MARKING**

Please note that your assignment will not be marked if,

- It is submitted after the due date.
- The file you uploaded does not open or is corrupt.
- It is in any format other than MS-Word or Open Office; e.g. Excel, PowerPoint, PDF etc.
- It is cheated or copied from other students, internet, books, journals etc.

***Note related to load shedding: Please be proactive***

### **Dear students:**

As you know that Post Mid-Term semester activities have started and load shedding problem is also prevailing in our country. Keeping in view the fact, you all are advised to post your activities as early as possible without waiting for the due date. For your convenience; activity schedule has already been uploaded on VULMS for the current semester, therefore no excuse will be entertained after due date of assignments, quizzes or GDBs.

**Best of Luck!**