International Islamic University Chittagong
Department of Electrical and Electronic Engineering

Final Assessment Autumn-2020 Program: B.Sc. Engg. (EEE)

Course Code: **ECON-3501** Course Title: Principle of Economics

Time: **5 hours** (Writing -**4 hours 30 minutes** + **30 minutes** submission time) Full Marks: **50** (**Written** 30 + **Viva**/**Viva-Quiz**-20)

[Answer **each of the** questions from the followings; Figures in the right margin indicate full marks. **Answer script must be submitted through online method within 5 hours from starting time. Also, write down the Q. Set on the front page of your answer script]**

Case study no – 01

Please read the passage carefully and answer the questions given below :

Some hate it and some love it, but regardless of how you feel oil is still a key part of our daily lives. The average Canadian uses about 20 barrels of oil each year, equivalent to about one and a half swimming pools. Since it is such a major part of our expenses, oil is a product where, when price changes, we really notice.

In 2008, China's expansion sparked a long period of high prices. In this case study, we will analyze what has happened to these prices over time and the impact this has had on oil producers from the lens of producer theory.

To simplify our case study, let's assume that the oil market is perfect competition.

1(a).	**Consider the above market structure for a single firm producing oil and the aggregate supply and demand, What is the firm's equilibrium price and quantity?**	**CO1**	**U**	**03**
1(b).	**What are the basic determinants of economic growth? How far they present in Bangladesh?**	**CO1**	**U,R**	**03**

The period of high prices indeed incentivized private firms to search farther than ever before – in the Arctic, Brazil's pre-salt fields, deep waters off Angola, and Canada's oil sands to ever expand the supply of oil. Investors encouraged this activity, rewarding future growth as much as profitability.

Oil prices have been quite volatile. Recently, from mid 2014 to early 2016 oil prices plummeted from $110 a barrel to around $27. This sharp decline has been due to a number of causes. A key cause was when sanctions were lifted from Iran, a new producer entered the market with large quantities of oil. In addition, growing fears about action on climate change, coupled with the emergence of alternative-energy technologies, caused producers to pump as hard as they can, while they can.

2(a).	**If the Given the total cost function TC = Student ID+ 15Q- $6Q^2+Q^3$ Where TC is total cost and Q is level of output.** **(i) Determine: (a) Total variable cost function, (b) marginal cost function and (c) Average variable cost function.** **(ii) Calculate Total cost, ATC, AVC and MC when the firm produces 50 units of output.**	**CO3**	**E**	**04**
2(b).	**What are the firm's profits at this price?**	**CO3**	**AN**	**02**

In the industry at large, the incentive is to keep producing "as flat out as you can", once investment costs have been sunk into the ground, says Simon Henry, Shell's chief financial officer. He says it is sometimes more expensive to stop production than to keep pumping at low prices, because of the high cost of mothballing wells. He suggested that firms will not pack up so long as prices cover day-to-day costs, in some cases as low as $15 a barrel.

It may be uneconomic to drill new deepwater wells at prices under $60 a barrel, he says, but once they are built it may still make economic sense to keep them running at prices well below that. Such resilience is used by some to justify why they expect prices to remain "lower for longer". Notice that in our model when prices fall, even in the short run individual firms will decrease production. In reality, firms part of the Organization of Petroleum Exporting Countries (OPEC) made a pact to keep production high, to try to retain market share and keep out competitors.

3(a).	**What does this excerpt suggest about how firms will behave in the short run?**	**CO2**	**AN**	**03**
3(b).	**Based on the information given about this market, what do you think the time horizon will be for this industries 'long run'? What will happen in the long run?**	**CO3**	**U**	**03**

Case study no – 02

Please read the passage carefully and answer the questions given below :

Speaking at last month's economic policy symposium in Jackson Hole, Wyoming, Federal Reserve Chair Jerome Powell described vividly the challenges that central bankers face in a world of constant change and uncertainty. These challenges make it impossible for the Fed to perfectly fine-tune the economy. Chair Powell's preferred, gradual approach to raising interest rates is therefore justified. The Fed could meet these challenges even more effectively, however, by adopting and following a monetary policy rule. The Fed could meet these challenges even more effectively by adopting and following a monetary policy rule.

In his remarks at Jackson Hole, Chair Powell drew special attention to the "shifting stars," meaning the time-varying natural rates of interest ("r-star") and unemployment ("u-star") expected to prevail in the long run, that is, when the economy is experiencing normal growth instead of boom or recession. In a static world without uncertainty, the Fed could easily judge whether its policy is too loose or too tight by comparing its target for the federal funds rate to the natural rate. By holding the funds rate below r-star, the Fed causes monetary policy to be expansionary, pushing unemployment below its natural rate and allowing inflationary pressures to build. And by raising the funds rate above r-star, the Fed makes policy contra dictionary : unemployment also rises above u-star and disinflationary forces take hold.

Chair Powell's natural-rate framework highlights that the Fed's ability to stabilize inflation in the long run depends on its ability to track, with its funds rate target, underlying trends in the natural rate of interest. This is why the Fed needs to continue raising interest rates: not to choke off the economic expansion, but to maintain an environment of stable prices within which economic growth can persist.

4(a).	**"Unemployment problem is mainly cyclical, not structural" Explain this statement from your view point.**	**CO2**	**Ap**	**04**
4(b).	***How can you differentiate*** **between growth and development?**	**CO3**	**R**	**02**

If r-star and u-star were constant and known, then the Fed would have no trouble fine-tuning the economy in the short run as well. Alas, neither of these natural-rate variables stays constant for long and, as Chair Powell's review of monetary history makes clear, the Fed's own misperceptions of the natural rates have sometimes caused policy to stray far off track. During the 1970s, for instance, Fed officials consistently underestimated the natural rate of unemployment u-star. Believing that there was more slack in the economy than there actually was, they adopted policies that were far too accommodative, fueling the sustained rise in prices now known as the "Great Inflation."

5(a).	**'The important reason behind inflation is sometime positive for economy", Argue from your own perspective.**	**CO2**	**C**	**03**
5(b).	**How Trade Policy works positively ? In the aspect of Bangladesh, Briefly explains the objectives of Trade Policy.**	**CO2**	**U**	**03**
6.	**Viva/Viva-Quiz: The time of viva/viva-quiz will be declared in Google classroom.**	**CO2**	**R,U**	**20**