1 Recent changes in the world oil market

The world price of oil is primarily determined by OPEC (Organization of the Petroleum Exporting Countries), which is a cartel consisting of 15 major oil producing countries. These countries have over 75% of the world’s reserves of oil. Saudi Arabia is effectively the leader of the cartel. It exercises leadership by adjusting the output of the cartel to maintain the price agreed by the cartel’s members. Russia and the US are not members of OPEC, but they engage in collusion with the cartel by accepting the oil price agreed by OPEC.

Between 2010 and 2019 United States (US) oil production increased from 6m barrels per day (mbd) to 12 mbd, equal to the output of Russia and exceeding that of Saudi Arabia. The increase in US production was mainly through a process known as fracking, with low fixed costs and high variable costs. This contrasts with Russia and Saudi Arabia where oil production involves high fixed costs and low variable costs.

In spring 2020, faced with a falling world oil price, Saudi Arabia proposed to cut its oil production. Russia did not agree with the proposal and increased its output by 4%. Saudi Arabia responded by increasing its output by 20%. The result of this disagreement was that the world price of oil fell significantly from US$70 per barrel to under US$30 per barrel. The situation was not helped by a sharp drop in the global demand for oil as many countries shut down large sections of their economies in response to the coronavirus (Covid-19) pandemic.

The joint action of Russia and Saudi Arabia was thought to be an attempt to undermine the US oil industry. This was because oil exports were a major source of income for both countries. Oil was responsible for more than 60% of Russia’s exports and provided more than 30% of the country’s gross domestic product (GDP). For Saudi Arabia, the importance was even greater. The oil sector accounted for about 70% of export earnings, and 50% of GDP.

The high price of oil in past years had enabled Russia to accumulate a significant budget surplus. The recent fall in the price of oil was thought to double the budget deficit of Saudi Arabia to US$100 billion at a time when the government was seeking to develop the country’s industry and reduce unemployment.

(a) Define what is meant by a cartel. [2]

(b) ‘Russia and the US are not members of OPEC, but they engage in collusion with the cartel.’ Explain what the term collusion means in the context of an oligopoly. [3]

(c) The oil production processes used by Saudi Arabia and the US have different proportions of fixed costs and variable costs. Analyse why the fall in the price of oil may have a more significant effect on the output of oil in the US. [7]

(d) Discuss, with the use of AD/AS diagrams, how Russia and Saudi Arabia are likely to be able to respond to the fall in oil prices. [8]
Section B

Answer two questions.

2 A rational consumer will always purchase less of an item as the price increases.

Discuss, with the use of indifference curve analysis, whether this statement is correct. [25]

3 (a) Explain the relationship between marginal revenue and average revenue and their role in determining the output and profit of a profit maximising firm in a perfectly competitive market. [12]

(b) Discuss the significance of economies of scale for the survival of firms. [13]

4 (a) Explain how the problems of climate change, such as global warming, may be regarded as a consequence of resource misallocation. [12]

(b) Evaluate two policies a government may implement to reduce the impact of climate change. [13]

5 The best outcome for labour markets is that the forces of supply and demand are left to determine wages without government interference.

Discuss with the use of diagrams, whether this statement is always true. [25]

6 (a) Distinguish between the characteristics of developed (high-income) and developing (low-income) countries. [12]

(b) Discuss whether gross domestic product (GDP) is the best measure of the standard of living. [13]

7 (a) Explain the relationship between the Keynesian demand for money and the rate of interest. [12]

(b) Discuss whether monetary policy alone is sufficient for a government to achieve its macroeconomic aims simultaneously. [13]