Q.34

Topic:	Impact of yen's fluctuations and Japanese monetary policy
Relevant economic topics:	Price elasticity of demand, function of price, aggregate demand and aggregate supply, quantity theory of money, monetary policy, balance of payments, effects of a change in the exchange rate
Types of material:	Line graph, news excerpt, opinions
Question design: (total marks: 33 marks)	Elementary-level questions (19 marks); Advanced-level questions (14 marks)

(a) <u>Verbal elaboration:</u>

The USD appreciated against the JPY. (1 mark)

Given that the prices of US goods (in terms of USD) have remained unchanged, the price of US exports to Japan (in terms of JPY) would increase. Japan would buy fewer goods from the US. (1 mark)

Japan's demand for US exports would decrease. (1 mark)

The quantity transacted would decrease. (1 mark)

Total value of US exports to Japan (in terms of USD) would decrease. (1 mark)

<u>Illustrate in the diagram:</u>

- leftward shift of the demand curve (1 mark)
- quantity transacted decreases (1 mark)
- total value of exports decreases (1 mark)

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(b) QTM: MV = PY, where M = money supply, V = velocity of circulation of money, P = price level and Y = real output, assuming V is constant. (2 marks)
An open market purchase of government bonds will increase the money supply. If the growth rate of M exceeds that of Y by more than 2%, the growth rate of P will be higher than 2%. (2 marks)

(c) No. The foreign exchange intervention will cause the Japanese yen to appreciate against the US dollar. The price of imported ingredients (in terms of JPY) will decrease. Production cost will decrease and short run aggregate supply will increase. The price level will decrease. The intervention will not help the government achieve its inflation target. (3 marks)
OR
Any reasonable answer (3 marks)

(d) Allocative function: an increase in demand for Japanese electrical appliances would drive up their prices (in terms of JPY). This would induce the manufacturer to direct more resources towards the production of electrical appliances. (2 marks)

(e) Perfectly inelastic. The university professor's quantity demanded of the US dollar remains the same (USD 5,000) regardless of the change in the price of the Japanese yen. (2 marks)

(f) Marks awarded for effective communication (EC: max 2 marks)

Marks	Performance
2	● *Arguments supported with the source/data and appropriate economic theories* ● *Relevant materials presented* ● *Well-organised and coherent answers presented without repetition of ideas* ● *Ideas clearly and fluently expressed with appropriate use of language/words/terms/symbols*
1	● *Arguments presented with some support of the source/data and economic theories* ● *Some irrelevant materials presented* ● *Answers presented in a less organised way with some repetition of ideas* ● *A clear message conveyed with some inappropriate use of language/words/terms/symbols*
0	● *Arguments presented with no support of the source/data and economic theories* ● *Materials unrelated to the gist of the question presented*

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	● *Inconsistent arguments presented* ● *Limited ideas expressed with inappropriate use of words/terms/symbols*

The maximum marks for content is 12 marks. Answers may include the following:

<u>Effects on the general price level:</u>

- Money supply will increase, interest rate will decrease. Consumption and investment will increase. An increase in the money supply will also cause a depreciation of the Japanese yen (according to the forex trader in Source D). Japan's exports will increase while imports will decrease, net exports will increase. Aggregate demand will increase. The general price level will increase.
- The Japanese yen will depreciate against the US dollar. Assuming that the price of imported raw materials (in terms of USD) remains unchanged, the price of imported raw materials (in terms of JPY) will increase. Production costs will increase and short run aggregate supply will decrease. The general price level will increase.

<u>Effects on the balance of payments:</u>

- The Japanese yen will depreciate against the US dollar. Japan's net exports will increase. The current account surplus will increase (or the deficit will decrease), and the balance of payments will improve.
- The Japanese yen will depreciate against the US dollar. Foreign workers in Japan may have lower incentive to stay and work in Japan. Japan's income payable abroad and current transfer to abroad will decrease. The current account surplus will increase (or the deficit will decrease), and the balance of payments will improve.

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Effects on other variables:

Tax revenue

- The Japanese yen will depreciate against the US dollar. Japan's exports will increase. Some firms may increase their production (according to the electrical appliance manufacturer in Source D), their profits may increase. However, the depreciation of the Japanese yen against the US dollar may lead to an increase in the production cost of some firms, which may cause their profits to decrease. The change in tax paid by the firms will be uncertain.
- As some firms may increase their production, the demand for labour may increase. The tax paid by the workers may increase.
- The Japanese yen will depreciate against the US dollar. Foreign workers in Japan may have lower incentive to stay and work in Japan. The tax received by the government from foreign workers in Japan may decrease.
- Money supply will increase and interest rate will decrease. Consumption will increase. The government's consumption tax revenue may increase.

Unemployment rate

- The Japanese yen will depreciate against the US dollar. Japan's exports will increase. Some firms may increase their production. Demand for labour may increase. The unemployed population will decrease. Assuming the labour force remains unchanged, the unemployment rate will decrease.
- Foreign workers may have lower incentive to continue working in Japan. If the number of job positions is constant and domestic workers in Japan can replace these foreign workers, the unemployed population will decrease. Assuming the labour force remains unchanged, the unemployment rate will decrease.

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