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**Question 1: Economics****(43 points)**

By the end of June 1991, India's foreign currency reserves had declined to USD 975 million, hardly enough to pay for two weeks of imports, manifesting symptoms of a balance of payments crisis. The annual inflation rate was soaring above 16 per cent and the GDP growth rate (for 1991) was less than 1 per cent.

- a) What are two major components of the balance of payments besides the current account? Explain how the current account leads to a balance of payment crisis? (8 points)

The 1991 balance of payments crisis was turned into an opportunity by the Indian government to re-set the direction of the economy by liberalizing the economy and through reforms in various sectors. Ten years later in May 2001 the picture provided a sharp contrast. Foreign currency reserves were 43 billion USD, equivalent to nine months of imports. The current account deficit was close to 1 per cent of GDP, and the GDP growth rate was itself among the highest in the world, having accelerated to 7.25 per cent by the mid 1990s.

	1997	1998	1999	2000	2001
Current Account (in million USD)	-550	-4038	-4698	-2579	782

- b) As seen in the table above, the current account has been showing a deficit from 1997 to 2000. Was this a sign of economic weakness? Explain. (5 points)

The Indian currency market had been tightly controlled since independence in 1947 and the Indian Rupee was highly overvalued until 1991 when the exchange rate system was transformed in less than two years from a discretionary, basket-pegged system to a largely market-determined unified exchange rate.

- c) Before 1991, if India wanted to maintain the option of conducting an independent monetary policy as well as having a fixed exchange rate, what would be its effect on capital mobility? (5 points)

Currently, although the exchange rate system in India is supposed to be a free float, the RBI (Reserve Bank of India) intervenes in the market at regular intervals to direct the movement in Rupee values. The intervention by the RBI in the market could be passive (whereby RBI does not directly intervene) or active (whereby the RBI itself purchases or sells dollars in the market). Therefore, it may well be stated that the exchange rate system in India is not exactly a free float.

- d) How is the exchange rate determined in a free float system? What are the undesirable features of a free float exchange rate system? (8 points)

A comparison of the inflation rates in India vis-à-vis the United States is shown below.

Country	Subject Description	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
India	Inflation, Index, 2000=100	75.697	81.12	91.853	96.145	100	103.78	108.24	112.36	116.59	121.54
India	Inflation, annual percent change (Percent)	9	7.2	13.2	4.7	4	3.8	4.3	3.8	3.8	4.2
United States	Inflation, Index, 2000=100	91.095	93.225	94.667	96.743	100	102.82	104.45	106.84	109.69	113.4
United States	Inflation, annual percent change (Percent)	2.9	2.3	1.5	2.2	3.4	2.8	1.6	2.3	2.7	3.4

Source: IMF's WORLD ECONOMIC OUTLOOK Database, April 2006

- e) Is there any relation between the inflation rate of a country and the exchange rate of its currency vis-à-vis another currency? Firstly, explain it verbally. Then express it mathematically. Based on the inflation data above, what can you say about the exchange rate of the India Rupee against the US dollar over the period under consideration?

(11 points)

The actual exchange rate between the Indian rupee (INR) and the US dollar (USD) from 2002 is given below:

	Jan 2002	Jan 2003	Jan 2004	Jan 2005
INR for 1 USD	48.344	48.12	45.69	43.47

- f) Do the above exchange rate values correspond with your answer to sub-question e)? If not, what could be the possible reasons for such a mis-match? Give 3 reasons. (6 points)