



CII Institute of Logistics

Post Graduate Diploma in Supply Chain Management
Semester-end Examination June 2008

ECONOMIC AND SOCIAL ENVIRONMENT ANALYSIS

Time : Three Hours

Marks : 100

Part A

Answer all questions (10 x 1 = 10 Marks)

1. The current rate of growth of GDP in India is
 - a. 7% to 8%
 - b. 6%
 - c. 10%
 - d. 8% to 9%
2. The energy consumed in Transportation by Rail is 1/6th of energy consumed in transportation by Road.
 - a. True
 - b. False
3. India has a coast line of nearly 6000 Kms.
 - a. True
 - b. False
4. Bottlenecks in infrastructure are a serious problem to India's growth
 - a. True
 - b. False
5. Which of the following is not a form of renewable energy
 - a. Wind
 - b. Solar
 - c. Oil
 - d. Wave
6. India is the third largest economy in Asia.
 - a. True
 - b. False

7. Which of the following is not a stage in the growth of an industry.
 - a. Growth Stage
 - b. Mature Stage
 - c. Shake-out Stage
 - d. Permanent Stage
8. Which of the following is not a non-tariff barrier.
 - a. Port Restrictions
 - b. Health and Sanitary Restrictions
 - c. Imposition of Customs Duty
 - d. Quantitative Restrictions
9. The key advantage of Hydro-Electric Power is the ability to store energy and the flexibility of its use during peak load periods.
 - a. True
 - b. False
10. Sustainable development does not prohibit the use of natural resources but restricts their use in a suitable way to leave something sustainable for the future generation.
 - a. True
 - b. False

Part B

Answer any three (3 x 15 = 45)

1. Discuss the importance of technology for the logistics industry and enumerate the current and future sources of improvement for the sector in terms of technology.
2. Discuss the impact of globalization & investment and enumerate their effect on the logistics industry.
3. What are the major issues of Social infrastructure in India? Debate the problems and solutions.
4. Discuss integration in Global logistics and suggest solutions for increasing the efficiency of supply chain by following the integrated approach to managing flows .
5. Explain major policy initiatives in infrastructure such as the Golden Quadrilateral, Broad Band, and E.D.I. etc. and suggest innovative measures in the area of improving the infrastructure.

Part C

Case Study (3 x 15 = 45)

Read the case carefully and answer all the questions. You may substantiate your answers with diagrams or models or data as may be necessary.

The Energy and Climate Crisis and the supply chain industry:

The alarm bells have started ringing around the world. The world is facing an unprecedented double whammy of rising pollution and galloping energy costs. The impact of energy use pollution is being felt everywhere – on the soil, over the waters and in the atmosphere. The ozone hole scare has not still completely gone away. However new scary nightmares are springing up everywhere. There is now clear evidence that the tough snow peaks and massive ice bergs of the Arctic and the Antarctic are melting. Even the Himalayan Glaciers are seen to be retreating. The effect is negative and manifold. The melting of polar ice is sure to drive up the volume of ocean waters which will inundate and swallow whole coasts around the world. Countries like Maldives may simply disappear. Valuable costal land and flourishing coastal populations may suffer, resulting in unpalatable migration and social upheavals. Storms will increase and devastate fertile areas. The recent cyclone in Burma killed more than 100,000 people and destroyed more than a million homes. According to Analysts, Burma has been set back by a couple of decades at least. They also warn that such devastations may occur with increasing frequency and ferocity.

The Green House Emissions emanating from the wide spread and sustained use of fossil fuels have made the globe warmer. Scientists say that even if major corrective action is taken immediately, it will be decades if not centuries before any turn around can be sensed. They advocate drastic cuts in fuel emissions. If their targets are to be followed religiously, it will mean a reduction in the current pace of modern lifestyle. Given the fact that lifestyle achieved is a symbol of honor for the advanced economies and since dependence on such lifestyle has reached a near incurable point, countries in the Western Hemisphere have been rather reluctant to take the lead in altering their questionable way of living and using scarce and polluting resources. On the other hand, they demand an impossible pound of flesh from the developing economies such as China and India who are reluctant to halt their hard earned economic progress in its track. China and India have legitimate reasons to fear that any forced reduction in the use of energy will simply mean

shrinkage of the economic pie and attendant loss of growth, opportunity and employment. With 1/5th of the world's humanity living in China and India, such a recipe is viewed as a potential social catastrophe. Therefore, no bets can be offered on making the necessary sacrifices to halt and reverse the climate crisis any time sooner. In the meanwhile, the crisis is bound to get more and more acute.

Compounding the climate crisis and the inexorable global warming is the man made crisis in galloping of energy costs. The cost of one barrel of crude oil has seen a peak of US\$.135 and threatens to stay in stratospheric ranges. The price of oil has more than doubled in just one year. Nobody knows how and why. In the estimate of leading economies such as the United States, the industrial growth in China and India which depend on energy use is more to blame than the consumption in the Western World and the rest of the World. All the same analysts still maintain that demand and supply are almost evenly matched in the oil market. Therefore the ruthless and exponential price increases are hard to explain solely from the view point of market forces of demand and supply. Sometime ago, a question was put to a leading business news channel as to who sets the price for oil that even the mighty United States which is the sole super power has to follow. The Organization of Petroleum Exporting Countries (OPEC) has denied that it sets the prices. The OPEC says it only follows the international prices. The United States Government also says it does not set the price. Major economies such as the European Union and Japan have also declared similarly. China and India, of course, do not set prices. The oil companies deny price fixing and speculation and say that they too follow international prices. Therefore, it is a huge mystery as to how the price of oil gets set and keeps changing on a daily basis. The wild gyrations in oil prices match the volatility of the substance. It is high time that global bodies such as the United Nations and International Energy Agency intervene and takes steps to find out the real cause and ease the speculation and inflation in oil price movements. The stabilization of oil price has become a global necessity if not an international emergency.

The increase in costs of energy is bound to have an adverse effect on the supply chain industry. The logistics sector depends on rail, road and water ways as well as air. All the different modes of transportations are heavily energy dependant. The International Trade is conducted to the extent of 70% over the seas. The shipping fleets cannot do without oil and going back to the sailing era is a nightmare for international maritime trade. The supply chain industry is uniquely placed to exploit the current energy crisis and lead the way in finding uses of alternative modes of energy.

Companies such as Amara Raja Batteries Limited have announced research in electric batteries to drive automobiles. Niche firms are also specializing in meeting solar power of sufficient

concentration and intensity as well as making it affordable. As the maxim goes, necessity is the mother of invention. The supply chain industry should actively look at alternative sources of energy such as electric battery and solar devices and with a religious zeal should convert to such devices. They can lead the rest of the society in the movement away from dependence on expensive oil and show the way towards alternative resources which are definitively cleaner and renewable. It is also time to built new paradigms in vehicle manufacture in order to boost fuel efficiency not in incremental measure but in quantum leaps. The supply chain industry virtually owns every moving truck and ship that ferries goods across frontiers. The sector has an opportunity and responsibility which is inter twined. It has to reduce its use of fuel through increasing operational efficiencies. Certain measures that can be thought of are increased freight consolidation, containerization, constant and smooth flow. Cutting down on waste and stoppage of flow will add to savings and efficiency. The industry should encourage the use of electric vehicles for short haul operations. They must press for port modernization and should consider moving nodal points of logistics to ports and airports as close as possible. They must consider using water ways too. The logistics industry should take the lead and arrange interaction with all stake holders in order to snatch a golden chance to make out a new path from the jaws of despondency, dependence and numbing routine.

The energy crisis hurts everybody, but the logistics sector faces the brunt of the crisis. They cannot shirk their role in combating the menace and innovating solutions. The question is:

Will the supply chain industry use the crisis to liberate itself for decades to come or will it slip into the crisis and get pulled along by whatever destiny that awaits it? Only time will tell.

1. Discuss the origins and implications of global warming and energy crisis.
2. What in your view could be done to mitigate global misery resulting from the twin crises of climate change and energy pollution and galloping costs of energy as well?
3. Discuss the role of supply chain industry in facing up to the crisis.
