**THE OPEN UNIVERSITY OF SRI LANKA**
**FACULTY OF ENGINEERING TECHNOLOGY**
**BACHELOR OF INDUSTRIAL STUDIES (INDUSTRIAL MANAGEMENT)**
**SUSTAINABLE INDUSTRIAL DEVELOPMENT – MEI 6350**
**FINAL EXAMINATIN 2009/2010**

**DATE : 28th March 2010**
**TIME : 1400hrs – 1700hrs**
**DURATION : THREE HOURS**

**ANSWER FIVE QUESTIONS ONLY. ALL QUESTIONS CARRY EQUAL MARKS**

(1) (i) "The Industrial Revolution was not merely a matter of technology, it was an instrument of social change." Discuss this statement.

(10 marks)

(ii) Steam engine has been described as the prime mover of the Industrial Revolution. Discuss the impact of the steam engine and later the internal combustion engine, on industrial development.

(10 marks)

(2) (i) Describe three major global conferences on the "Environment," and the decisions taken at or outcome of these conferences.

(10 marks)

(ii) Discuss the important provisions of the National Environmental Act (NEA) of 1980.

(10 marks)

(3) (i) 'Nuclear energy is being promoted as a means of reducing dependence on fossil fuels, and the resultant environmental pollution from the use of fossil fuel. State your arguments in favour of or against this view'.

(10 marks)

(ii) Renewable energy resources such as solar, wind etc. are often being promoted as alternatives to fossil fuel based energy. What are the limitations to the use of renewable energy sources on a large scale?

(10 marks)

(4) (i) Explain the term "Corporate Social Responsibility" (CSR) taking two large Sri Lankan companies as examples.

(10 marks)

(ii) What benefits can a company expect from a well designed CSR programme?

(10 marks)

(5) (i) What are the indicators that can be used to assess the profitability of environmental projects? Explain their significance related to the projects.

(10 marks)

(ii) The top management of the organization should periodically review their Environmental Management Systems (EMS) to ensure its operations perform effectively as planned. Describe the procedure that they should adopt in this reviewing process.

(10 marks)

(6) (i) Why ecological back pack is important in process analysis?

(05marks)

(ii) How is biotechnology categorised according to the industry which uses it?

(05 marks)

(iii) What is meant by nanotechnology? Discuss the advantages and disadvantages of this novel technology.

(10 marks)

(7) (i) Describe five main steps involved in developing a waste management plan.

(10 marks)

(ii) What is Pollution Prevention (P2)? Briefly describe the benefits of waste minimisation.

(10 marks)

(8) (i) What is Life Cycle Assessment and why is it important? Explain.

(10 marks)

(ii) Briefly describe the concept of Environmental Management Accounting.

(10 marks)

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