OR

a) What is the World Bank's involvement in Carbon Finance? Who are the beneficiaries of the Bank's actions in carbon finance?

b) What are the different powers given to the Central/State Pollution Control Boards/Committees under the Water Act?

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Roll No .....

MEEM - 105

M.E./M.Tech., I Semester

Examination,December 2015

Environment Issues Policy, Standards and Regulations

Time : Three Hours

Maximum Marks : 70

Note : All questions carry equal marks, draw neat sketch and assume suitable data wherever you required.

1. a) Are human activities or natural variations in climate responsible for the climate change being observed today? Is it too late to do anything about climate change?
   b) What is a Kyoto target? How can a country achieve its target?

OR

   a) Explain the purpose of Prototype Carbon Fund (PCF) and discuss about Prototype Carbon Fund (PCF) value chain. What is the emissions trading scheme and does it work?
   b) What is the Clean Development Mechanism (CDM)? What is the role of the UNFCCC secretariat in implementing CDM projects?

2. a) Why the Global Study into management effectiveness evaluation was undertaken. Why we need management effectiveness evaluation.
   b) What is ISO 14000? What is the role of BIS in ISO 14000? What is the difference between certification and accreditation?

OR

a) What are the main elements covered by ISO 14001 environmental management systems?

b) Is UNEP duplicating the role of the UNFCCC? Explain the strategic planning process six steps that you can use to develop, implement, and evaluate your strategic plan:
   i) Prepare
   ii) Assess
   iii) Create
   iv) Communicate
   v) Implement
   vi) Evaluate

3. a) Assume that a large stream has a reoxygenation constant k_2' of 0.4/day, a flow velocity of 5 miles/h, and at the point of pollutant discharge, the stream is saturated with oxygen at 10 mgL. The wastewater flow rate is very small compared with the stream flow, so the mixture is assumed to be saturated with dissolved oxygen and to have an oxygen demand of 20 mg/L. The deoxygenation constant k_1' is 0.2/day. What is the dissolved oxygen level 30 miles downstream?

b) How is waste defined and do certain categories of waste involve additional duties or controls? To what extent is a producer of waste allowed to store and/or dispose of it on the site where it was produced?

OR

a) The EPA has calculated that unit lifetime risk from Exposure to Ethylene Dibromide (EDB) in drinking water is 0.85 LCF per 10^5 persons. What risk is experienced by drinking water with an average EDB concentration of 5 pg/L for five years?

b) Develop and apply an interaction matrix for the following proposed actions designed to clean municipal wastewater in your home town: (a) construct a large activated wastewater treatment plant, (b) require septic tanks for households and small-scale package treatment plants for industries.

4. a) How do you define the pollution as per Water Act, 1974? Also write the salient features of this Act.

b) What are objectives of the Air (Prevention and Control of Pollution) Act 1981? What are the functions of Central Board under the Air Act?

OR

a) Discuss the role of various governmental agencies in environmental protection and control. Briefly discuss the salient features of Environmental (Protection) Act.

b) Define and classify biomedical waste. Is BMW regulated as hazardous waste? Describe the steps of biomedical waste management.

5. a) What are the functions of the State Boards under the Air Act 1981?

b) If you had two bottles full of lake water and kept one dark and the other in daylight, which would have a higher dissolved oxygen after a few days? Why? Name three types of samples you would need to seed if you wanted to measure their BOD.