



Department of Mathematics and Philosophy of Engineering  
Postgraduate Diplomas/MSc in Environmental Sciences

Level 6

NEP1302/1206 - Environment, Society and Development  
Final Examination - 2013/2014 (Open Book Examination)

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Date: 06.04.2014

Time: 09.30 a.m.- 12.30 p.m.

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**Instructions**

- Answer any Four (4) questions in your own words.
  - Marks will be deducted, if a direct copy from the texts or the references.
  - This paper contains 2 pages
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1. "Agriculture has a direct impact on the environment by way of water use and depleting soil fertility. In addition disposal of bio-waste too impacts on the environment". Discuss these issues and how the impact could be minimised by adapting suitable scale of operation and using more environmentally friendly technologies.
2. "Development is generally assessed by Gross National Product and it distorts the long-term effects on sustainability, unless externalities are taken into account".

- (a) Discuss this statement with respect to sustainable agriculture and how short-term deficits, if any, could be mitigated by suitable fiscal and economic measures.
  - (b) Describe how negative- and positive-externalities could be built into assessing the outcome.
3. "In a farming economy, climate changes have a direct impact on human activities related to their livelihoods".
  - (a) Describe how these changes were incorporated into farming without causing massive disruption to livelihoods.
  - (b) Explain some of the technologies that are adapted to mitigate climate effects on agriculture and how these affect equity among different farming communities.
4.
  - (a) Identify important features of "sustainable development".
  - (b) Critically analyze the Programme "Beautification of Colombo" conducted by the Urban Development Authority in collaboration with the Colombo Municipal Council from the perspective of "sustainable development".
5. Assuming that you are appointed from today as an advisor to the Ministry of Power and Energy, propose important guidelines for a 30-year-plan for the Sri Lankan energy sector by taking into consideration the challenges, that Sri Lanka will face in the future.
6. Critically discuss the validity of the "Asiatic Mode of Production" as a model of social organisation to face the three challenges (i) poverty eradication, (ii) bridging the ethnic divide among Sinhala , Tamil and Muslim Communities and (iii) global warming.