

UNIVERSITY OF COLOMBO, SRI LANKA

FACULTY OF ARTS

Third Year Examination in Arts (Economics)-2016/2017

(End of Second Semester)

ECN 3285: Economics of Sustainable Development

Time Allowed: Two (02) Hours

Answer FOUR (04) Questions Only

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1. "Sustainable development is a contestable and an ambiguous phrase."
- (a) How did the Brundtland Commission report of 1987 (titled 'Our Common Future') define the term 'sustainable development'? (4 marks)
- (b) Despite controversies on the definition, there appears to be a consensus regarding the goals of sustainable development. Describe the three main aims of sustainable development. (6 marks)
- (c) According to Jeffrey Sachs neither the free market system nor the Keynesian approach is delivering good results for sustainable development. Explain why the free market system and the Keynesian approach fails to achieve sustainable economic development. (15 marks)
2. (a) Discuss the interlinks between the environment and the economy. (6 marks)
- (b) "A fundamental debate in sustainability is whether we choose to adopt a strong or weak concept of sustainability". Distinguish between the weak and strong forms of sustainability. (8 marks)
- (c) What are the core drivers of unsustainability? (4 marks)
- (d) Briefly state the ecological economics perspective to sustainability. (7 marks)
3. (a) Discuss the importance of environmental valuation. (10 marks)
- (b) Read the following information and answer the questions below.
- Assume X Bay has a diverse coastal eco-system and includes a large river mouth area (estuary). Access to the bay influences the property prices in the area.
  - The bay area is surrounded by urban housing and agricultural users. Their runoff, including sewage and fertilizer pollutes the X Bay area water.
  - The water quality in the bay area also influences the property prices. The water quality measured by fecal coliform concentration is currently measured as -0.0656 counts per 100 ml of water, which denotes a high level of water pollution.
  - A unit increase in the fecal coliform concentration beyond the existing measure will decrease property values by Rs. 65,000.
  - If all properties and agricultural users in the X Bay area are compelled to meet with the water quality standards of fecal coliform (by preventing sewage and fertilizer from mixing with the river mouth water) the associated benefit is an estimated Rs. 12 million.

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- (i) Discuss the impact of a population increase on the sustainable development of the X Bay area. (3 marks)
- (ii) What type of valuation method is most suitable to measure the land value/property values in this case? Give reasons for your answer. (3 marks)
- (iii) If all properties and agricultural users in the X Bay area are compelled to meet with the water quality standards of fecal coliform, what will happen to the property values of this area? (3 marks)
- (iv) What is the economic cost (in Rupees) of not cleaning up the environment to meet with the water quality standards? (3 marks)
- (v) What happens to the opportunity cost of owning a home in the X Bay area after the water quality standard is met (after the clean-up)? (Hint: state whether opportunity cost will increase or decrease). (3 marks)
4. (a) Explain ways in which unsustainable global economic growth threatens the planetary boundaries. (10 marks)
- (b) "Poverty affects sustainable development while sustainable development is not important for the eradication of poverty" Do you agree with this statement? Give reasons. (15 marks)
5. (a) Discuss how ensuring of gender equality leads to sustainable development. (10 marks)
- (b) Explain the constraints to engage in productive (income earning) activities often encountered by women in underdeveloped economies. (15 marks)
6. (a) State the two main conditions that should be met for a city to be recognized as a sustainable city. (8 marks)
- (b) Describe the economic characteristics of an unsustainable city. (10 marks)
- (c) 'Smart cities have better ways/smart plans for sustainable growth and development'. Explain this statement giving examples where necessary. (7 marks)
7. (a) What is an environmental impact assessment (EIA)? (5 marks)
- (b) Explain the difference between the benefit-cost analysis and the extended benefit-cost analysis. (5 marks)
- (c) Taking into consideration an environmental or a social issue from any region/country familiar to you, discuss its impact on sustainable development. (15 marks)
8. Write short notes on any **FOUR (04)** of the following. (Equal marks each)
- (a) Economic benefits of the proposed carbon tax on all motor vehicles excluding electrical vehicles.
- (b) Sustainable livelihoods.
- (c) The Rio Declaration on Environment and Development in 1992.
- (d) United Nation's Sustainable Development Goals.
- (e) Renewable Economy.
- (f) Environmental Protection License (EPL).

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