

DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION (TVE)
ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)
ORGANISATION OF ISLAMIC COOPERATION (OIC)

Semester Final Examination

Course No: HUM 4147

Course Title: Technology, Environment and Society

Winter Semester (2017-2018)

Time : 3 hours

Full Marks : 150

There are 8 (Eight) questions. Answer any 6 (Six).
Figures in the right margin indicate marks of the questions.

1. a) Define ecosystem. Describe the components of an ecosystem. 05
b) Write a short note on Ecosystem Services. 10
c) Define Biodiversity. What are the necessary elements of a rich biodiversity in an ecosystem? Explain with example. 10
2. a) Define carrying capacity of an ecosystem. Do you think, carrying capacity can be enhanced with the help of science and technology? Clarify with appropriate example. 10
b) Explain the term Environmental Justice with example. 05
c) Why is Environmental Stewardship important for environmental protection? Explain the core principles of Environmental Stewardship. 10
3. a) Why does the curve of temperature fluctuate in various layers of atmosphere? Explain with appropriate drawings. 10
b) List out the consequences of Global Warming on Earth. What are the actions can be taken to reduce the adverse impact of Global Warming? 10
c) Write a short note on 'Acid Precipitation'. 05
4. a) Define Climate and Climate Change with appropriate examples. 05
b) Various researches revealed that, concentration of carbon dioxide in atmosphere in the last 50 years (1960-2010) increased from 310 ppm to 390 ppm. Mention the reasons behind this increase. 10
c) Describe the impacts of air pollution on livelihood and environment. 10
5. a) Describe Hydrological/Water cycle with necessary illustration. 10
b) Define Water Quality. How can Biochemical Oxygen Demand (BOD) help us to measure Water Quality? 10
c) Define point water pollution and non-point water pollution with appropriate examples. 05
6. a) Write short notes on the following: i) Waste Hierarchy ii) Polluter Pays Principle, and iii) 3R(s) in Waste Management. 5x3
b) What are the main types of Renewable energy sources? Write the Pros and Cons of Renewable Energy. 10
7. a) Write down major environmental concerns of today's world. What are the impact areas of a Cyclone on the coastal communities? 10
b) Write short notes of the following: i) Kyoto Protocol, ii) Carbon Footprint, iii) Carbon Trading. 5x3
8. a) Define risk, hazard, vulnerability and coping capacity in the face of natural disaster. Give example of each terminology from your understanding. 10
b) Give a list of Ecologically Critical Areas under the Bangladesh Environmental Conservation Rules, 1997. 05
c) Write short notes of the following: i) Urban Heat Island, ii) Biodiversity Conservation. 5x2