

**ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)**

ORGANISATION OF ISLAMIC COOPERATION (OIC)

DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION (TVE)

Exam: Semester Final Examination

Academic Year: 2022 – 2023

Course Number: Hum 4659

Full Marks: 150

Course Title: Technology, Environment and Society

Duration: 3 Hours

There are 6 (six) questions. Answer all of them. The symbols have their usual meaning.

- How industrialized countries are maintaining environmental quality? Explain the process of ozone layer depletion with chemical reactions. Mention the impacts of ozone layer depletion on Human health and Ecology. (15) CO1 PO7
  - Describe the different forms of responses of humans due to environmental change. (10)
- What are the conditions that green technology has to fulfill? Suppose an industry in your locality is discharging effluent into the river and at the same time emitting GHG. Demarcate the component of pollution as (1) Local and (2) Global. Show the linkage between them. (15) CO2 PO7
  - Explain the relationship between the environment, society, and technology. Explain the functions of an Ecosystem. (10) CO1
- Municipal waste management is generally accepted as one of ways of fighting pollution. Which approach would you suggest to Gazipur city cooperation to deal with their solid waste? Point out the pros and cons of the suggested approach. (15) CO3 PO7
  - These days a popular slogan in Dhaka is "SAVE THE BURIGANGA" After describing different environmental protection methods, select the method most suitable to solve this complicated problem. Show reasons behind selecting the suggested method. (10) CO2
- The Bandarban is a mountainous place where the highest peak of Bangladesh is located. In addition there are small to medium mountains. Due to the height above Mean Sea Level, the characteristic of the region is sustained wind over the mountains in the valleys with an average speed of 30km/h. Although there are high demands of habitable and cultivable lands, the mountains are relatively barren. The three hilly rivers flowing through the district are the Sangu, Matamuhuri and Bakkhali. Any interventions in the rivers is politically sensitive due to the Kaptai hydroelectric project in the neighboring district Rangmati and any extraction of forest product is strictly prohibited. Agricultural wastes are not significant and are mainly consumed locally. The local hill geology makes any kind of geological survey expensive and no space available to dump any waste. The district gets very little electricity from the national grid. Being a tourist place and also ecologically sensitive region, there is high demand of producing electricity from the alternative sources. As an energy specialist, using information given above, you have to decide: What will be the alternative source from which electricity can be produced? You have to answer the question after analyzing all the alternatives under the prevailing conditions of the area and have to select only the best one. (25) CO2 PO7

5. a) Give a list of ecologically critical Areas under Bangladesh Environmental Conservation Rules, 1997. (15) CO3 PO7

Write short notes on the following:-

i) Urban Heat Island.

ii) Biodiversity Conservation.

b) In order to reduce the emission of greenhouse gases in Dhaka, which type of green energy would you recommend the government to enforce and why? (10)

6. Write short notes on the following:- (25) CO3 PO7

i. Kyoto protocol.

ii. Ecological Footprint.

iii. Carbon Trading.

iv. Montreal Land Protocol.

v. Paris Agreement.