

Programme: BSc EEE 6th Semester
Semester: Summer

Date: 05 May, 2023 (Friday)
Time: 10:00 am – 01:00 pm

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

Exam: Semester Final Examination
Course No: Hum 4621
Course Title: Technology, Environment and Society

Academic Year: 2021 - 2022
Full Marks: 150
Duration: 3 Hours

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

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|----|----|---|----------------|-----|-----|
| 1. | a) | Define the environment. Explain the interrelation of technology, environment, society and development. | (2+8)
= 10 | CO1 | |
| | b) | What is Biome? Identify the main characteristics of six major Biomes of the earth's land areas. | (2+12)
= 15 | CO1 | PO7 |
| 2. | a) | Write a short note on - sustainable development. Explain the role of technology to measure sustainable development with relevant examples. | (5+10)
= 15 | CO2 | PO7 |
| | b) | Define the carrying capacity of an ecosystem. Explain the carrying capacity of a pond ecosystem with necessary illustration(s). | (3+7)
= 10 | CO2 | |
| 3. | a) | Describe environmental equity and justice with examples. | (5+5)
= 10 | CO2 | |
| | b) | Why is Environmental Stewardship important for environmental protection? Explain the core principles of Environmental Stewardship. | (5+10)
= 15 | CO2 | PO7 |
| 4. | a) | Describe Hydrological/Water cycle with necessary illustration. | 10 | CO3 | |
| | b) | Define Water Quality. Explain the natural process of water quality management by using Oxygen SAG Curve. | (2+8)
= 10 | CO3 | PO7 |
| | c) | Discuss causes and effects of Eutrophication in a waterbody. | 5 | CO3 | |
| 5. | a) | Define waste. Name the typologies of waste according to their 'Effect on life and environment'. | 15 | CO3 | PO6 |
| | b) | Explain 'waste hierarchy' and its resource recovery model. | 10 | CO3 | |
| 6. | a) | Define risk, hazard, vulnerability and coping capacity in the face of natural disaster. Give examples of each terminology from your understanding. | (6+4)
= 10 | CO3 | |
| | b) | How can engineering and technological knowledge contribute to reducing the impact of natural disasters? Explain some examples of useful technology and engineering solutions. | 15 | CO3 | PO6 |

- 4
7. a) Define Renewable and Non-renewable energy with relevant examples. Describe the societal impacts of investing in the renewable energy sector with examples. (4+6) CO3
= 10
- b) How can a person ensure green living? Explain in the perspective of attitude towards: (3X5) CO3 PO6
= 15
i. Energy consumption,
ii. Waste generation, and
iii. Technology use.
8. a) Write down major environmental concerns of today's world. What are the impact areas of a Cyclone on the coastal communities? (5+5) CO2
= 10
- b) Write short notes of the following: (3X5) CO3 PO7
= 15
i. Green Technologies,
ii. Carbon Footprint, and
iii. Heat Island Effect.