

TRIBHUVAN UNIVERSITY  
INSTITUTE OF ENGINEERING  
**Examination Control Division**  
2082 Shrawan

Exam.	Back		
Level	BE	Full Marks	40
Programme	BCE, BGE	Pass Marks	16
Year / Part	IV / II	Time	1 1/2 hrs.

**Subject:** - Technology, Environment and Society (CE 753)

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt **All** questions.
- ✓ The figures in the margin indicate **Full Marks**.
- ✓ Assume suitable data if necessary.

1. Define technology, environment, and society. Discuss the impacts of technology on culture, tradition, and social values in Nepal. [4+4]
2. What is meant by community empowerment? Justify the role of engineer along with empowered community is crucial for the success of developmental activities. [2+6]
3. a) How industrial revolution impacted society and environment in United Kingdom? [4]  
b) Justify the need of transitioning from non-renewable to renewable energy sources. [4]
4. Discuss the causes and impacts of indoor air pollution in Nepal. Also, recommend suitable mitigative measures to indoor air pollution in our context. [4+4]
5. Write short discussion on any two of the following. [2×4]
  - a) Climate change: causes and consequences
  - b) International efforts to mitigate climate change
  - c) Focus group discussion and key informant interviews
  - d) Information as power and wealth

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TRIBHUVAN UNIVERSITY  
INSTITUTE OF ENGINEERING  
**Examination Control Division**  
2081 Chaitra

Exam.	Regular		
Level	BE	Full Marks	40
Programme	BCE,BGE	Pass Marks	16
Year / Part	IV/ II	Time	1 <sup>1</sup> / <sub>2</sub> hrs.

**Subject:** - Technology Environment and Society (CE 753)

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt **All** questions.
- ✓ The figures in the margin indicate **Full Marks**.
- ✓ Assume suitable data if necessary.



1. Define Technology, Environment, and Society. Justify the statement, "Technology is Irreversible" with suitable examples. [4+4]
2. List out main data collection methods in ethnographic survey. Explain the importance of ethnographic survey to understand societal dynamics. [3+5]
3. a) Discuss in brief about the transition phase of industrial to information society in terms of challenges and opportunities. [4]  
b) Define conflict of resources and optimum use of natural resources with examples. [4]
4. Define organic and inorganic pollutant with example. Describe the mitigative measures of the indoor air pollution in our context. [4+4]
5. Define weather, climate change, and climate variability. Justify the statement, "think globally act locally" with respect to global warming. [4+4]

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TRIBHUVAN UNIVERSITY  
INSTITUTE OF ENGINEERING  
**Examination Control Division**  
2080 Chaitra

Exam.	Regular		
Level	BE	Full Marks	40
Programme	BCE, BGE	Pass Marks	16
Year / Part	IV / II	Time	1 1/2 hrs.

**Subject:** - Technology Environment and Society (CE 753)

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt All questions.
- ✓ The figures in the margin indicate Full Marks.
- ✓ Assume suitable data if necessary.



1. Define technology. Discuss about the characteristics of technology with suitable example. [2+6]
2. Describe briefly about the LEP development approach. Discuss the role of engineers as facilitators in community-led development project. [4+4]
3. Define climate change & climate variability. List out the challenges of climate changes being faced by our country, and also discuss about national and international efforts to tackle climate change. [2+2+4]
4. a) Define industrial revolution. Describe the environmental consequences industrial revolution. [1+3]  
b) List out the key environmental issue people facing in Kathmandu valley and discuss about the pressing factors of those environmental issue. [1+3]
5. Describe Fecal-oral infection transmission route with examples of primary and secondary barriers. [6+2]

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TRIBHUVAN UNIVERSITY  
INSTITUTE OF ENGINEERING  
**Examination Control Division**  
2079 Chaitra

Exam.	Regular		
Level	BE	Full Marks	40
Programme	BCE, BGE	Pass Marks	16
Year / Part	IV / II	Time	1 ½ hrs.

**Subject:** - Technology Environment and Society (CE753)

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt **All** questions.
- ✓ The figures in the margin indicate **Full Marks**.
- ✓ Assume suitable data if necessary.



1. Define technology. Write down benefit of technology on environment and society. [8]
2. Discuss advantages and disadvantages of labor based and labor intensive development approach with suitable examples. [8]
3. a) Justify with suitable examples on how climate change becomes threat to human civilization. [4]  
b) Define regional and global environmental issues. And also discuss briefly about the factors contributing to global warming. [4]
4. Discuss with suitable examples on how development activities have impacts on environments and society. [8]
5. What are the key international efforts to combat climate change effects? How Nepal can be streamlined to it? [8]

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TRIBHUVAN UNIVERSITY  
INSTITUTE OF ENGINEERING  
**Examination Control Division**  
2078 Chaitra

Exam.	Regular		
Level	BE	Full Marks	40
Programme	BCE, BGE	Pass Marks	16
Year / Part	IV / II	Time	1 ½ hrs.

**Subject:** - Technology Environment and Society (CE753)

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt **All** questions.
- ✓ The figures in the margin indicate **Full Marks**.
- ✓ Assume suitable data if necessary.



1. Define technology. Discuss the impact of technology on environment and society. [2+6]
2. Define community management. Describe how participatory approach encourages to empowerment community in development activity. [2+6]
3. a) Discuss in brief on transformation of industrial society to information society. [4]  
b) Describe about conflict of resources with suitable examples. [4]
4. List and the key causes of water and air pollution in the Kathmandu Valley. Also, recommend mitigation measures to air and water pollution. [4+4]
5. Define climate change with suitable example of extreme events. Also, describe about key international efforts to mitigate climate change impacts. [4+4]

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TRIBHUVAN UNIVERSITY  
INSTITUTE OF ENGINEERING  
**Examination Control Division**  
2077 Chaitra

Exam.	Regular		
Level	BE	Full Marks	40
Programme	BCE, BGE	Pass Marks	16
Year / Part	IV / II	Time	1 ½ hrs.

**Subject:** - Technology Environment and Society (CE 753)

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt All questions.
- ✓ The figures in the margin indicate Full Marks.
- ✓ Assume suitable data if necessary.

1. Define appropriate technology with suitable examples. Also, describe how technology helps create opportunity while transforming a society. [2+6]
2. Discuss about the LEP development approach with both merits and demerits. [8]
3. a) Describe in brief about the “Great Renaissance of Europe” with key features. [4]  
b) Discuss briefly on the Global Environmental issues and its driving force. [4]
4. Explain the reason of air and water pollution in the Kathmandu valley with its major mitigation measures. [4+4]
5. Write short notes on: (Any Two) [2×4]
  - a) Bio-gas and its suitability in Terai Region of Nepal
  - b) Climate Change and International Efforts
  - c) Deforestation and its consequences

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TRIBHUVAN UNIVERSITY  
INSTITUTE OF ENGINEERING  
**Examination Control Division**  
2076 Bhadra

Exam.	Regular / Back		
	Level	BE	Full Marks
Programme	BCE, BGE	Pass Marks	16
Year / Part	IV / II	Time	1½ hrs.

**Subject:** - Technology, Environment and Society (CE 753)

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt **All** questions.
- ✓ The figures in the margin indicate **Full Marks**.
- ✓ Assume suitable data if necessary.

1. How technology unmask old social problem? Justify your answer with suitable examples. [8]
2. What are the essential features of Participatory approach? Write down the advantages and disadvantages of public participation on developing project. [8]
3. What do you mean by an Information Society? Differentiate it with agricultural and industrial society. [2+6]
4. List out the climate change gases. Explain the effect of climate change and write down international efforts. [4+4]
5. Explain fecal-oral group of infections. Discuss preventive measures to transmit these infections. [4+4]

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03 TRIBHUVAN UNIVERSITY  
INSTITUTE OF ENGINEERING  
**Examination Control Division**  
2075 Bhadra

Exam.	Regular		
Level	BE	Full Marks	40
Programme	BCE, BGE	Pass Marks	16
Year / Part	IV / II	Time	1 ½ hrs.

**Subject:** - Technology Environment and Society (CE753)

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt All questions.
- ✓ All questions carry equal marks.
- ✓ Assume suitable data if necessary.

1. What do you mean by Resource Mapping? Discuss about participatory approach for community management.
2. What are appropriate technologies? How are they useful in least developed countries like Nepal? Justify with suitable examples.
3. What is air pollution? What are the causes, impacts and mitigation measures of air pollution?
4. What are the factors contributing to the climate change? Explain briefly the international efforts towards mitigation measures undertaken globally.
5. How technology can control the price of basic commodities? Explain.

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04

TRIBHUVAN UNIVERSITY

INSTITUTE OF ENGINEERING

**Examination Control Division**

2074 Bhadra

Exam.	Regular		
Level	BE	Full Marks	40
Programme	BCE, BGE	Pass Marks	16
Year / Part	IV / II	Time	1 ½ hrs.

**Subject:** - Technology Environment and Society (CE753)

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt **All** questions.
- ✓ **All** questions carry equal marks.
- ✓ Assume suitable data if necessary.

1. What are the elements for the sustainable development? How can you say Indigenous technology are sustainable in case of Nepal.
2. Discuss about the major environmental issues of Nepal. How can we reduce air pollution of Kathmandu?
3. What are the primary reasons for human interventions in the ecosystem?
4. Describe causes and Impacts of climate change. How can we protect our National Parks and Conservation Areas .
5. How do you describe the LEP Approach for the development of Nepal? Explain advantages and disadvantages of LEP Approach.

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Exam.	Back		
Level	BE	Full Marks	40
Programme	BCE, BGE	Pass Marks	16
Year / Part	IV / II	Time	1 ½ hrs.

**Subject:** - Technology Environment and Society (CE753)

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt **All** questions.
- ✓ The figures in the margin indicate **Full Marks**.
- ✓ Assume suitable data if necessary.

1. Define technology? As a civil engineer how have you been benefited by technologies? [2+6]
2. How participatory approach encourage to empowerment community in development activity. [8]
3. Discuss about world war I and world war II along with the positive and negative impacts. [8]
4. What are the major environmental issues in Nepal? Discuss along with the causes and mitigation measures. [8]
5. What are the factors contributing to climate change? Discuss about the impacts of climate change in case of Nepal. [8]

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INSTITUTE OF ENGINEERING  
Examination Control Division

2073 Bhadra

Exam.	Regular		
Level	BE	Full Marks	40
Programme	All (Except B.Arch.)	Pass Marks	16
Year / Part	IV / II	Time	1 ½ hrs.

**Subject:** - Engineering Professional Practice (CE752)

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt **All** questions.
- ✓ The figures in the margin indicate **Full Marks**.
- ✓ Assume suitable data if necessary.

1. a) What are the major activities to be governed by the society for its survival? Illustrate the impacts of computer on Nepalese society. [4]  
b) Explain how individual freedom balances societal goals. [4]
2. a) What do you mean by Profession? Explain its characteristics. [4]  
b) What is ethics? Write in short the code of ethics for engineering profession. [4]
3. a) What are the preparations to be made before inviting competitive bidding notice? How the contract can be interpreted in case of ambiguity? Define percentage contract and in which category of procurement, this form of contract is adopted? [4]  
b) What is intellectual property right? Write in briefly the working hour provision of labour law. Differentiate between public and private company. [4]
4. a) Explain business law and labour law in Nepal. [4]  
b) Explain globalization and cross cultural issues. [4]
5. Write short notes on: (Any four) [2×4]
  - a) Jurisdiction of Nepal Engineering Council
  - b) Job description of fresh graduates
  - c) Detailed duties and liabilities of an engineer and architect
  - d) Nepal Engineers Association
  - e) Society and development

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Exam.	New Back (2066 & Later Batch)		
Level	BE	Full Marks	40
Programme	BCE, BGE	Pass Marks	16
Year / Part	IV / II	Time	1 ½ hrs.

**Subject:** - Technology Environment and Society (CE 753)

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt All questions.
- ✓ All questions carry equal marks.
- ✓ Assume suitable data if necessary.

1. What are the elements for the sustainable development? How can you say Indigenous technology are sustainable?
2. What do you mean by climate change? Write major symptoms of climate changes in Nepal. State some international efforts for mitigation and adaptation of climate change induced problems.
3. Define environment and ecosystem? Describe how the disposal of sludge and industrial waste results in pollution of river, lakes and canals? Recommended appropriate mitigation measures to minimize the impacts.
4. Describe the major changes the industrial Revolution brought to human civilization.
5. How do you describe the LEP Approach for the development of Nepal? Explain advantages and disadvantages of LEP Approach.

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Exam.	Regular		
Level	BE	Full Marks	40
Programme	BCE	Pass Marks	16
Year / Part	IV / II	Time	1 ½ hrs.

**Subject:** - Technology, Environment and Society (CE753)

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt **All** questions.
- ✓ **All** questions carry equal marks.
- ✓ Assume suitable data if necessary.

1. What do you mean by technology? Write down benefits of technology in education sector.
2. Describe the LEP Approach for the development of Nepal? Explain community empowerment process of LEP Approach.
3. What are the primary reasons for human interventions in the ecosystem? How natural resources of ecosystem is converted into wealth?
4. What are the factors contributing to global warming? Outline their sources, impacts and mitigation measures of global warming.
5. Discuss the major environmental issues of Nepal? What are the causes of acid rain?

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Exam.	New Back (2066 & Later Batch)		
Level	BE	Full Marks	40
Programme	BCE	Pass Marks	16
Year / Part	IV / II	Time	1 ½ hrs.

**Subject:** - Technology, Environment and Society (CE753)

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt **All** questions.
- ✓ **All** questions carry equal marks.
- ✓ Assume suitable data if necessary.

1. Define technology is the foundation of civilization. Discuss the impact of technology on society.
2. What do you understand by information society?
3. Describe the fecal oral transmission route. Also discuss the role of the health education regarding the water pollution in environment.
4. What is climate change and what would be the appropriate mitigation measures to reduce its effects?
5. Write down causes, effects and mitigation measures of air pollution

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04

TRIBHUVAN UNIVERSITY

INSTITUTE OF ENGINEERING

Examination Control Division

2071 Bhadra

Exam.	Regular / Back		
Level	BE	Full Marks	40
Programme	BCE	Pass Marks	16
Year / Part	IV / II	Time	1½ hrs.

**Subject:** - Technology, Environment and Society (CE753)

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt **All** questions.
- ✓ The figures in the margin indicate **Full Marks**.
- ✓ Assume suitable data if necessary.

- 1/ Define technology and its impact on societies. Define appropriate technology and its relevancy to LDC. [8]
- 2/ Write down in detail causes, effects and mitigation measures of air pollution. [8]
- 3/ a) Discuss LEP approach in infrastructure development. [4]  
b) Discuss the role of Engineer in Community Management. [4]
- 4/ What is climate change? Write down its probable impacts and problems mitigation measures that Nepal can adopt. [6]
- 5/ Differentiate between renewable and non-renewable energy. [5]
- 6/ Discuss intellectual revival of Europe in 13 to 15 century. [5]

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04 TRIBHUVAN UNIVERSITY  
 INSTITUTE OF ENGINEERING  
**Examination Control Division**  
 2070 Bhadra

Exam.	<b>Regular</b>		
Level	BE	Full Marks	40
Programme	BCE	Pass Marks	16
Year / Part	IV / II	Time	1½ hrs.

*Subject: - Technology Environment and Society (CE753)*

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt All questions.
- ✓ The figures in the margin indicate **Full Marks**.
- ✓ Assume suitable data if necessary.

1. What is "Agricultural Age", "Industrial Age" and "Information Age"? Explain. Write the positive as well as negative impact of technology on society. [4+4]
2. Describe briefly the impact of early part of industrial revolution. Describe the impact of World War I and II in our society. [3+5]
3. How participatory approach encourage to empowerment community in development activity? Write some key features of infrastructure development policies of Nepal. [2+6]
4. Define ecosystem and ecology. How increasing population disturbs to natural ecosystem and how to minimize this disturbance? List out the major environmental issues of Nepal. [2+3+3]

**OR**

- What are the sources of Air and Water Pollution? Write some mitigation measures of water and air pollution? [4+4]
5. What is climate change? Describe its impacts and potential mitigation measures. Also describe international efforts made to address this problem. [1+4+3]

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Exam.	New Back (2066 & Later Batch)		
Level	BE	Full Marks	40
Programme	BCE	Pass Marks	16
Year / Part	IV / II	Time	1½ hrs.

*Subject: - Technology Environment and Society (CE753)*

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt All questions.
- ✓ The figures in the margin indicate Full Marks.
- ✓ Assume suitable data if necessary.

1. What is meant by industrial and information society? Discuss the impacts of computer and cybernetics in creating information society that makes the whole world as a global village. [8]
2. State the different ages of human development. Write the key developments on technology during first and Second World War and their positive and negative impact on population. [3+5]
3. What are the different key features of infrastructure development policies of Nepal? Do participatory approaches empower community, justify your answer. [3+5]
4. Define environment and ecosystem. Describe how the disposal of sludge and industrial waste results in pollution of river, lakes and canals? Recommended appropriate mitigation measures to minimize the impacts. [8]
5. What do you mean by climate change? Write major symptoms of climate changes in Nepal. State some national and international efforts for mitigation and adaption of climate induced problems. [1+4+3]

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05

TRIBHUVAN UNIVERSITY

INSTITUTE OF ENGINEERING

Examination Control Division

2069 Bhadra

Exam.	Regular / Back		
Level.	BE	Full Marks	40
Programme	BCE	Pass Marks	16
Year / Part	IV / II	Time	1½ hrs.

**Subject:** - Technology, Environment and Society (EG767CE)

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt any Five questions.
- ✓ All questions carry equal marks.
- ✓ Assume suitable data if necessary.

1. Define industrial revolution, industrial society and information society. Also discuss about the transformation from industrial to information society.
2. Describe about the industrial wastewater and its treatment methods. And, list out the major causes of polluting Bagmati River in Kathmandu.
3. "Technology can control price" Do you agree with this statement. Support your views with examples.
4. How Nepalese society is impacted by technology in course of time? What is the major environmental problem of Nepal?
5. What is climate change? Describe its impacts and potential mitigation measures. Also describe international efforts made to address this problem
6. Write short notes on: (any two)
  - a) Ecology, ecosystem and its characteristics
  - b) Technology and shift in employment
  - c) Air pollution, pollutant, its impacts and control measures
  - d) Acid rain, its impacts and control measures

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