विद्युत नियमन आयोग
विविध सेवा, वातावरण समूह, तह ७, वातावरणविद् पदको
खुला/आन्तरिक प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

यस पाठ्यक्रमलाई दुई चरणमा विभाजन गरिएको छः

प्रथम चरण :- लिखित परीक्षा (Written Examination) पूर्णाङ्क :- २००

द्वितीय चरण :- अन्तर्वार्ता (Interview) पूर्णाङ्क :- ३०

परीक्षा योजना (Examination Scheme)

१. प्रथम चरणः लिखित परीक्षा (Written Examination) **पूर्णाङ्क :- २००**

पत्र	विषय	पूर्णाङ्क	उत्तीर्णाङ्क	खण्ड	परीक्षा प्रणाली	प्रश्न संख्या	अङ्क भार	समय
प्रथम	सामान्य ज्ञान, बौद्धिक परीक्षण तथा विद्युत नियमन सम्बन्धी	१००	४०	(क)	वस्तुगत बहुवैकल्पिक प्रश्न (MCQs)	५०	१	१ घण्टा ३० मिनेट
	General Technical Subject			(ख)	वस्तुगत बहुवैकल्पिक प्रश्न (MCQs)	५०	१	
द्वितीय	Technical Subject	१००	४०	(क)	छोटो उत्तर आउने प्रश्न	२	५	३ घण्टा
					लामो उत्तर आउने प्रश्न	४	१०	
				(ख)	छोटो उत्तर आउने प्रश्न	२	५	
					लामो उत्तर आउने प्रश्न	४	१०	

२. द्वितीय चरणः अन्तर्वार्ता (Interview) **पूर्णाङ्क :- ३०**

विषय	पूर्णाङ्क	परीक्षा प्रणाली
अन्तर्वार्ता	३०	मौखिक

द्रष्टव्यः

१. लिखित परीक्षाको माध्यम भाषा नेपाली अथवा अंग्रेजी वा नेपाली र अंग्रेजी दुवै हुन सक्नेछ।

२. प्रथम र द्वितीय पत्रको लिखित परीक्षा छुट्टाछुट्टै हुनेछ।

३. लिखित परीक्षामा सोधिने प्रश्न संख्या र अङ्कभार यथासम्भव सम्बन्धित पत्र / विषयमा दिइए अनुसार हुनेछ।

४. वस्तुगत बहुवैकल्पिक (Multiple Choice) प्रश्नहरूको गलत उत्तर दिएमा प्रत्येक गलत उत्तर बापत २० प्रतिशत अङ्क कट्टा गरिनेछ । तर उत्तर नदिएमा त्यस बापत अङ्क दिइने छैन र अङ्क कट्टा पनि गरिने छैन।

५. वस्तुगत बहुवैकल्पिक प्रश्नहरू हुने परीक्षामा परीक्षार्थीले उत्तर लेख्दा अंग्रेजी ठूलो अक्षर (Capital Letter) A, B, C, D मा लेख्नुपर्नेछ। सानो अक्षर (Small Letter) a, b, c, d लेखेको वा अन्य कुनै सङ्केत गरेको भए सबै उत्तरपुस्तिका रद्ध हुनेछ।

६. बहुवैकल्पिक प्रश्नहरू हुने परीक्षामा कुनै प्रकारको क्याल्कुलेटर (Calculator) प्रयोग गर्न पाइने छैन।

७. विषयगत प्रश्नहरूको हकमा एउटा लामो प्रश्न वा एउटै प्रश्नका दुई वा दुई भन्दा बढी भाग (Two or more parts of a single question) वा एउटा प्रश्न अन्तर्गत दुई वा बढी टिप्पणीहरू (Short notes) सोध्न सकिनेछ।

८. विषयगत प्रश्न हुने पत्र/ विषयको प्रत्येक खण्डका प्रश्नका लागि छुट्टाछुट्टै उत्तरपुस्तिकाहरू हुनेछन्। परीक्षार्थीले प्रत्येक खण्डका प्रश्नको उत्तर सोही खण्डको उत्तरपुस्तिकामा लेख्नुपर्नेछ।

९. यस पाठ्यक्रम योजना अन्तर्गतका प्रश्न/ विषय विषयवस्तुमा जुनसुकै कुरा लेखिएको भए तापनि पाठ्यक्रममा परेको कानुन, ऐन, नियम, विनियम तथा नीतिहरू परीक्षाको मिति भन्दा ३ महिना अगाडि (संशोधन भएका वा संशोधन भई हटाइएका वा थप गरी संशोधन भई) कायम रहेकालाई यस पाठ्यक्रममा परेको सम्झनु पर्दछ।

१०.प्रथम चरणको परीक्षाबाट छनौट भएका उमेदवारहरूलाई मात्र द्वितीय चरणको परीक्षामा सम्मिलित गराइनेछ।

११.पाठ्यक्रम स्वीकृत मिति : २०८२/०१/०८

विद्युत नियमन आयोग

विविध सेवा, वातावरण समूह, तह ७, वातावरणविद् पदको

खुला/आन्तरिक प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

प्रथम पत्र :

खण्ड (क) सामान्य ज्ञान, बौद्धिक परीक्षण तथा विद्युत नियमन सम्बन्धी : ५० अङ्क

1. सामान्य ज्ञान (१५ × १ = १५ अङ्क)

1.1 नेपालको भूगोल र आर्थिक तथा सामाजिक क्रियाकलापः धरातलीय स्वरुपको किसिम र विशेषता, नेपालमा पाइने हावापानीको किसिम र विशेषता, नदीनाला, तालतलैया, खनिज पदार्थ, प्राकृतिक श्रोत साधन, विद्युत, शिक्षा, स्वास्थ्य र सन्चार सम्बन्धी जानकारी

1.2 नेपालको सामाजिक एवं सांस्कृतिक अवस्थाः परम्परा, धर्म, जाति, भाषाभाषी, कला, संस्कृति र साहित्य

1.3 नेपालमा विद्युत विकास, उर्जाका श्रोत र सम्भावना

1.4 नेपालको संघीय, प्रादेशिक र स्थानीय संरचना तथा शासन प्रणाली सम्बन्धी जानकारी

1.5 विश्वको भूगोलः महादेश, महासागर, अक्षांश, देशान्तर, अन्तर्राष्ट्रिय तिथि रेखा, समय, पर्वतशृंखला, नदी, हिमनदी. ताल, हिमताल

1.6 संयुक्त राष्ट्र संघ र यसका एजेन्सीहरू सम्बन्धी जानकारी

1.7 दक्षिण एशियाली क्षेत्रीय सहयोग संगठन (SAARC), SAARC- Energy Center, बिमस्टेक (BIMSTEC) सम्बन्धी जानकारी

1.8 राष्ट्रिय र अन्तर्राष्ट्रिय महत्त्वका समसामयिक घटना तथा नवीनतम गतिविधिहरू

2. संविधान, विद्युत क्षेत्रको नियमन र सम्बन्धित कानुनी व्यवस्था (१५ × १ = १५ अङ्क)

2.1 नेपालको संविधानः मौलिक हक र कर्तव्य, राज्यका निर्देशक सिद्धान्त, नीति तथा दायित्व, अनुसूचीहरू

2.2 विद्युत ऐन, २०४९ र विद्युत नियमावली, २०५०

2.3 विद्युत नियमन आयोग ऐन, २०७४ तथा विद्युत नियमन आयोग नियमावली, २०७५

2.4 विद्युत नियमन आयोग कर्मचारी प्रशासन विनियमावली, २०८१

2.5 सार्वजनिक खरिद ऐन, २०६३

2.6 विद्युत क्षेत्रमा नियमनको अवधारणा

2.7 विद्युत नियमन आयोगको काम, कर्तव्य तथा अधिकार

2.8 उपभोक्ता महशुल निर्धारणको सिद्धान्त तथा प्रक्रिया

2.9 विद्युत खरिद बिक्री दर निर्धारणका सिद्धान्त तथा प्रक्रिया

2.10 विद्युत नियमन आयोगको पाँच वर्षे मार्गचित्र २०८१-८६

3. Aptitude Test (20 ×1 = 20 Marks)

3.1 Verbal reasoning :

Series, analogy, classification, coding-decoding, insert the missing character, direction and distance sense test, ranking order, assertion and reason, statement and conclusion

3.2 Non-verbal reasoning:

Series, analogy, classification, matrices, figure formation and analysis, dot situation, water images, mirror images, embedded figures.

3.3 Quantitative aptitude:

Arithmetical reasoning/operation, percentage, fraction, ratio, average, profit & loss, time and work

3.4 General mental ability, logical reasoning and analytical ability, data interpretation

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खुला/आन्तरिक प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

खण्ड (ख)

General Technical Subject: (50 ×1 = 50 Marks)

1. **Basics of Environmental Science**
   - 1.1 Environment: concept, scope and practices; physical, biological and socio-economic aspects of environment and their interrelationships; environmental degradation and manifestations (land, water and air); environmental movements and environmental ethics
   - 1.2 Ecology : population characteristics and regulations
   - 1.3 Ecosystem dynamics: energy flow, biogeochemical cycles; terrestrial biomes and characteristics
   - 1.4 Environmental geology : geological materials and structures
   - 1.5 Weathering and erosion: types, cycle and control
   - 1.6 Mass movement: causes and mechanisms; Fluvial, glacial and Aeolian environmental processes
   - 1.7 Floods: classification, causes, triggering factors
   - 1.8 Global environmental issues : global warming, green economy, ozone layer depletion and acid rain

2. **Natural Resources**
   - 2.1 Water resources: sources, extent and assessment; Integrated Water Resource Management (IWRM) and water resources of Nepal
   - 2.2 Food Resources : major food resources and production; human nutrition and health and food resources of Nepal
   - 2.3 Energy resources: sources and classification; alternative energy resources; environmental issues of energy use; energy resource conversation practices and energy resources of Nepal
   - 2.4 Forest and biodiversity : forest types and biodiversity status of Nepal; ex-situ and in-situ conversation; biodiversity conversation approaches; carbon sequestration
   - 2.5 Resource economics : micro-economic analysis for accounting environmental resources; environmental Kuznets curve, cost benefit analysis and resources accounting; economic and regulatory instruments to control pollution

3. **Environmental Pollution and Climate Change**
   - 3.1 Pollution : types (air, water, sound), sources and categories of the pollutants
   - 3.2 Standard methods of water analysis; water and waste water treatment technologies
   - 3.3 Emission, transport, receptors of air pollutants, criteria air pollutants; air pollution measurement and emission estimates; air pollution control technologies
   - 3.4 Health effects of noise and control mechanisms
   - 3.5 Sources, types and composition of solid waste; solid waste management systems; management of industrial and agricultural chemical pesticides
   - 3.6 Toxicology and eco-toxicology : acute, sub-acute and chronic toxicity; dose and frequency response relationships
   - 3.7 Climate change : climate variability and theories of climate change; climate models and models-based projections of greenhouse effect
   - 3.8 Climate change impacts: agriculture and food security, water resources, energy, human health, biodiversity, settlement and infrastructure and livelihood
   - 3.9 Vulnerability assessment of climate change and mitigation and adaptation approaches (NAPA, LAPA)

4. **Environmental Management and Conservation**
   - 4.1 Environmental assessment: evolution in global and national perspectives
   - 4.2 Environmental assessment: process, practices, methods and tools
   - 4.3 Environmental Management Systems (EMS) & Modeling : concept, components and stages of EMS; ISO 14000 series, standards and certification systems; life cycle assessment and environmental labeling: types and importance of environmental models
   - 4.4 Remote Sensing & Geographic Information System (GIS) : concept, scope and stages in remote sensing and GIS; GIS applications in assessing environmental studies
   - 4.5 Environmental statistics : sampling, data analysis and interpretation, central tendency, measures of dispersion, correlation and regression, parametric and non-parametric tests
   - 4.6 Environmental governance: concerned stakeholders and networks; governance tools and strategies; adaptive management and sustainability

5. **Current Environmental Issues**
   - 5.1 Urbanization and its implications on the environment; urbanization infrastructures and environment; concept of urban planning and sustainable cities
   - 5.2 Land use and environment (land use pattern and zoning; Guided Land Development (GLD) and land pooling); principles of land use and land reclamation; factors governing land utilization and land use pattern, scenario of watershed management in Nepal
   - 5.3 Farming systems; modern agriculture and its impacts on environment, green revolution; sustainable agriculture and food aid policies; food security in Nepal
   - 5.4 Disaster Risk & Vulnerability Assessment : hazard, disaster, risk, exposure and vulnerability analysis; disasters due to earthquakes, landslide and river bank erosion, flood, GLOF, drought, epidemics, fire and industrial accidents; disaster risk management and practices

6. **Fundamental Approach for EIA and Ethics of EIA Process**
   - 6.1 Basic concepts for EIA and IEE Process in general
   - 6.2 Steps in EIA processes in project planning, preparation of scoping document, terms of reference, methods of impact analysis
   - 6.3 Assessment of the impact on physical, hydrological, biological, atmospheric, socioeconomic and cultural environment
   - 6.4 Knowledge of public involvement in the EIA and IEE process as per the Environment Protection Act and Environment Protection Regulation method and guidelines for public consultations
   - 6.5 Identification of the stakeholders of the project
   - 6.6 Ethics of EIA process

7. **Environmental Impact Management of Power Projects and Transmission Lines**
   - 7.1 Components of hydropower project and solar power projects
   - 7.2 Basic concept of EIA and IEE Process in hydropower and solar power projects; effects on environment by different project components and different phases of construction (construction, operation, environmental mitigation); monitoring and management plans for storage, run of river, peaking run of river projects at

different phases, Monitoring and management plans for solar power projects; auditing of power projects, processes and significance of environmental auditing

7.3 Basic process for EIA and IEE of Transmission line projects; environmental mitigation, monitoring and management plans for the identified impacts, Effects and mitigation to project components and different phases of project construction (construction, operation), mitigation and monitoring and auditing of transmission line projects, process and significance of environmental auditing

7.4 Basic process for EIA and IEE of thermal power plants; effect and mitigation related to project components and different phases of project construction (construction, operation); environmental mitigation, monitoring and management plans; knowledge of pollution control equipment; mitigation, monitoring and auditing

8. **Environmental Concerns of Power Projects in Nepal**

8.1 Comparative advantages, disadvantages, challenges and prospects of different sources of electricity (hydropower, solar, biomass, diesel, bagasse) from a socio-environmental standpoint

8.2 Socio-environmental impacts of hydropower projects, transmission lines, hydropower dams in Nepal

8.3 Energy sufficiency and environmental protection as mutually contradictory concepts and concepts of sustainable development of power sector

8.4 Prevalent socio-environmental issues related to hydropower and transmission line projects in Nepal and their remedies

8.5 Significance of environmental studies in hydropower projects, current trends and room for improvement; common socio-environmental mitigation measures employed in energy sector, their effectiveness

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द्वितीय पत्र :

Technical Subject

खण्ड (क) : ५० अङ्क

1. Basics of Environmental Science

1.1 Environment: Concept, Scope and Practices
- 1.1.1 Development of human society and environment
- 1.1.2 Physical, biological and socio-economic aspects of environment and their interrelationships
- 1.1.3 Environmental degradation and manifestations (land, water and air)
- 1.1.4 Environmental movements and environmental ethics

1.2 Ecology
- 1.2.1 Population characteristics and regulations
- 1.2.2 Community characteristics, regulation and succession
- 1.2.3 Ecosystem dynamics: energy flow, biogeochemical cycles
- 1.2.4 Terrestrial biomes and characteristics

1.3 Environmental Geology
- 1.3.1 Geological materials and structures
- 1.3.2 Weathering and Erosion: types, cycle and control
- 1.3.3 Mass movement: causes and mechanisms
- 1.3.4 Fluvial, glacial and Aeolian environmental processes

1.4 Climatology and Hydrometeorology
- 1.4.1 Horizontal and vertical temperature distribution
- 1.4.2 Mechanism of wind development, air masses dynamics
- 1.4.3 Climatic systems, distribution and classifications
- 1.4.4 Floods: classification, causes, triggering factors

1.5 Global Environmental Issues
- 1.5.1 Global warming
- 1.5.2 Green economy
- 1.5.3 Payment for ecosystem services
- 1.5.4 Ozone layer depletion and acid rain

2. Natural Resources

2.1 Water Resources
- 2.1.1 Water resources: sources, extent and assessment
- 2.1.2 Integrated Water Resource Management (IWRM)
- 2.1.3 Water Resources of Nepal
- 2.1.4 Problems of water resources management in Nepal

2.2 Food Resources
- 2.2.1 Major food resources and production
- 2.2.2 Human nutrition and health
- 2.2.3 Food resources of Nepal

2.3 Energy Resources
- 2.3.1 Energy resources: sources and classification
- 2.3.2 Alternative energy resources
- 2.3.3 Environmental issues of energy use
- 2.3.4 Energy resource conversation practices
- 2.3.5 Energy resources of Nepal

2.4 Forest and Biodiversity
- 2.4.1 Forest types and biodiversity status of Nepal

2.4.2 Ex-situ and in-situ conversation
2.4.3 Biodiversity conversation approaches
2.4.4 Carbon sequestration

2.5 Resource Economics
2.5.1 Micro-economic analysis for accounting environmental resources
2.5.2 Environmental Kuznets curve, cost benefit analysis and resources accounting
2.5.3 Economic and regulatory instruments to control pollution

3. Environmental Pollution and Climate Change

3.1 Water Pollution
3.1.1 Point and non-point sources and categories of water pollutants
3.1.2 Water pollutants effect on human health and ecosystems
3.1.3 Standard methods of water analysis
3.1.4 Water and waste water treatment technologies

3.2 Air Pollution
3.2.1 Sources and categories of air pollutants
3.2.2 Emission, transport, receptors of air pollutants, criteria air pollutants
3.2.3 Air pollutants effects on human health, property and visibility
3.2.4 Air pollution measurement and emission estimates
3.2.5 Air pollution control technologies

3.3 Sound Pollution
3.3.1 Noise sources and criteria
3.3.2 Health effects of noise and control mechanisms

3.4 Waste Management
3.4.1 Sources, types and composition of solid waste
3.4.2 Solid waste management systems
3.4.3 Issue, generation and management of e-waste, hazardous and hospital waste
3.4.4 Management of industrial and agricultural chemical pesticides

3.5 Toxicology and Eco-toxicology
3.5.1 Acute, sub-acute and chronic toxicity
3.5.2 Dose and frequency response relationships
3.5.3 Bioassays and attributes for predicting spices response to pollution stress

3.6 Climate Change
3.6.1 Climate variability and theories of climate change
3.6.2 Climate models and models-based projections of greenhouse effect
3.6.3 Climate change impacts: agriculture and food security, water resources, energy, human health, biodiversity, settlement and infrastructure and livelihood
3.6.4 Vulnerability assessment of climate change and mitigation and adaptation approaches (NAPA, LAPA)

4. Environmental Management and Conservation

4.1 Environmental Assessment
4.1.1 Environmental assessment: evolution in global and national perspectives
4.1.2 Environmental assessment: process, practices, methods and tools
4.1.3 Strategic environmental assessment for decision making and integrated planning

4.2 Environmental Management Systems (EMS) & Modeling
4.2.1 Concept, components and stages of EMS
4.2.2 ISO 14000 series, standards and certification systems

4.2.3 Life Cycle assessment and environmental labeling
4.2.4 Types and importance of environmental models

4.3 Remote Sensing & Geographic Information System (GIS)
4.3.1 Concept, scope and stages in remote sensing and GIS
4.3.2 Remote sensing image: acquisition, resolution, analysis and interpretation
4.3.3 GIS applications in assessing environmental studies

4.4 Environmental Statistics
4.4.1 Sampling, data analysis and interpretation
4.4.2 Central tendency, measures of dispersion
4.4.3 Correlation and regression
4.4.4 Parametric and non-parametric tests

4.5 Environmental Governance
4.5.1 Institutional arrangement (organogram) and environmental governance: concerned stakeholders and networks
4.5.2 Governance tools and strategies
4.5.3 Adaptive management and sustainability

खण्ड (ख): ५० अङ्क

5. Current Environmental Issues

5.1 Urban Environment
5.1.1 Urbanization and its implications on the environment (sanitation, solid and hazardous waste, air pollution, water pollution, groundwater depletion, food security)
5.1.2 Urbanization infrastructures and environment (housing, water supply and sanitation, waste management, transportation, electricity, markets and commercial areas, religious and heritage sites, open spaces and recreational areas)
5.1.3 Concept of urban planning and sustainable cities

5.2 Land Use and Watershed Management
5.2.1 Land use and environment (land use pattern and zoning; Guided Land Development (GLD) and land pooling)
5.2.2 Principles of land use and land reclamation
5.2.3 Factors governing land utilization and land use pattern, scenario of watershed management in Nepal
5.2.4 Development and conservation challenges in watershed management, watershed as ecosystems
5.2.5 Upstream-downstream linkages
5.2.6 Watershed conservation

5.3 Agriculture and Food Security
5.3.1 Farming systems
5.3.2 Modern agriculture and its impacts on environment, green revolution
5.3.3 Sustainable agriculture and food aid policies
5.3.4 Food security in Nepal

5.4 Disaster Risk & Vulnerability Assessment
5.4.1 Hazard, Disaster, Risk, Exposure and Vulnerability analysis
5.4.2 Disasters due to earthquakes, landslide and river bank erosion, flood, GLOF, drought, epidemics, fire and industrial accidents
5.4.3 Disaster risk management and practices

6. Fundamental Approach for EIA

6.1 Different levels of assessments such as EIA and Initial Environmental Examination (IEE) and their importance

6.2 Basic concepts for EIA and IEE Process in general

6.3 Steps in EIA processes in project planning, preparation of scoping document, terms of reference, methods of impact analysis

6.4 Assessment of the impact on

- 6.4.1 Physical environment
- 6.4.2 Hydrological environment
- 6.4.3 Biological environment
- 6.4.4 Atmospheric environment
- 6.4.5 Socioeconomic environment
- 6.4.6 Cultural environment

6.5 Knowledge of public involvement in the EIA and IEE process as per the Environment Protection Act and Environment Protection Regulation method and guidelines for public consultations

6.6 Identification of the stakeholders of the project

7. Environmental Impact Management of Power Projects and Transmission Lines

7.1 Hydropower Projects and Solar Power Projects

- 7.1.1 Components of hydropower project and solar power projects
- 7.1.2 Basic concept of EIA and IEE Process in hydropower and solar power projects
- 7.1.3 Assessment of impacts of hydropower development and Assessment of Impacts of Solar Power Projects related to resettlement, watershed erosion, silt runoff, water use conflicts, downstream flow variations, impact on air, noise and water quality, impacts of groundwater quality, eutrophication, reservoir shoreline erosion, encroachment into precious ecology, impact on wildlife, fisheries, neighborhood people's heath, income, social relations, impact due to possible change in livelihood, gender issues,
- 7.1.4 Effects on environment by different project components and different phases of construction (construction, operation, environmental mitigation)
- 7.1.5 Monitoring and management plans for storage, run of river, peaking run of river projects at different phases, monitoring and management plans for solar power projects
- 7.1.6 Auditing of power projects, processes and significance of environmental auditing
- 7.1.7 Environmental enhancement measures like rural electrification, watershed management, reservoir fishery, etc.

7.2 Transmission Line

- 7.2.1 Basic process for EIA and IEE of Transmission line projects
- 7.2.2 Assessment of impact related to transmission like resettlement, encroachment into precious ecology, encroachment on historical/cultural values, land value changes, fragmentation, aesthetics, electrical shock hazards, health and safety issues, gender issues, impact on neighborhood people's health, income, social relations, impact due to possible change in livelihood etc.
- 7.2.3 Environmental mitigation, monitoring and management plans for the identified impacts, Effects and mitigation to project components and different phases of project construction (construction, operation),

7.2.4 Mitigation and monitoring and auditing of transmission line projects, Process and significance of environmental auditing

7.3 Thermal Power Plant

7.3.1 Basic process for EIA and IEE of thermal power plants

7.3.2 assessment of possible impacts of thermal power plants development to resettlement, air, water quality; noise; encroachment into precious ecology, waste emission problems, hazardous spills, occupational health and safety, nuisance from fuel spills, impacts on neighborhood people's health, income, social relations; impact due to possible change in livelihood etc.

7.3.3 Effect and mitigation related to project components and different phases of project construction (construction, operation)

7.3.4 Environmental mitigation, monitoring and management plans

7.3.5 Knowledge of pollution control equipment

7.3.6 Mitigation, monitoring and auditing

8. Ethics of EIA Process

8.1 Practical ethics, Libertarianism, Discourse or communicative ethics, Procedural fairness or equity, Critical ethics, Communitarian ethics, Egalitarian ethics, Distributional or outcome equity or fairness, Research ethics, Professional ethics, Environmental ethics, Feminist ethics, Sustainability ethics, Ethical pluralism

9. Environmental Concerns of Power Projects in Nepal

9.1 Comparative advantages, disadvantages, challenges and prospects of different sources of electricity (hydropower, solar, biomass, diesel, bagasse) from a socio-environmental standpoint

9.2 Socio-environmental impacts of hydropower projects, transmission lines, hydropower dams in Nepal

9.3 Energy sufficiency and environmental protection as mutually contradictory concepts and concepts of sustainable development of power sector

9.4 Prevalent socio-environmental issues related to hydropower and transmission line projects in Nepal and their remedies

9.5 Significance of environmental studies in hydropower projects, current trends and room for improvement; common socio-environmental mitigation measures employed in energy sector, their effectiveness