

**SYLLABUS: 2083**  
**OPT. I Environment Science**  
**SYLLABUS: 2083**  
**Class X**

**O. I Env. Sci.**

**Grade: 10**

**Grade: 10**

**Time: 2:15 hrs.**

**Specification Grid:**

Unit	Topic	Period															
			knowledge			Underst			Applicati			Higher			Total		
			V	S	L	V	S	L	V	S	L	V	S	L	V	S	L
1	Introduction of environment	6					1									1	
2	Ecology and ecosystem	11	1				1								1	1	
3	Natural resources and Biodiversity of Nepal	18	1			1					1				2		1
4	Environmental Pollution	18	1			1								1	2		1
5	Climate change and its effects	12	1				1	1		1					2	1	
6	Alternative Energy	9	1	1											1	1	
7	Environment and Sustainable Development	14		1									1			2	
8	Environment and Public Health	11				1									1	1	
9	Natural Disaster and its Management	12	1										1		1	1	
10	Environment Management	17	1					1	1						1		1
	Total	128	7	2		3	3	1	1	1	1		2	1	1	8	3

Types of questions	Total questions	Full marks
Very short questions	11	11 X 1 = 11
Short Questions	8	8 X 5 = 40
Long questions	3	3 X 8 = 24
Total	22	75

**Notes:**

- ❖ All questions are compulsory
- ❖ One extra (or question) will be asked from environmental pollution for long type answer.
- ❖ One extra (or question) each from ecology and ecosystem, environment and public health will be asked for short (answer type) question.

**SYLLABUS: 2083**  
**FIRST TERMINAL EXAMINATION**

**O. I Env. Sci.**

**Grade: 10**

Unit	Topic	Period	Teaching methods	Evaluation, techniques and tool
1	Introduction to Environment 1.1 Concept of environment -Natural environment -Anthropogenic environment		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
2	Ecology and Ecosystem 2.1 Terrestrial Ecosystem 2.2 Aquatic Ecosystem 2.3 Food Chain		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
3	Natural Resources and Biodiversity of Nepal 3.1 Introduction and types of Natural resources 3.2 Biodiversity - Types of biodiversity, Biodiversity of Nepal, Importance of biodiversity		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
4	Environmental pollution 4.1 Radiation pollution - Definition, sources, effects, control measures		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
5	5 Climate change and its effects 5.1 Adaptation and Mitigation 5.1.1 Adaptation 5.1.2 Mitigation 5.1.3 LAPA		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
6	6. Alternative energy and its promotion in Nepal 6.1 Government Approach: Current Energy Policies 6.1.1 Periodic Development plan Upto, 6.1.7 Local self-governance act 2055		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
7	Environmental and sustainable development 7.1 Sustainable development and Agriculture 7.2 Innovative Eco-technology in Agriculture		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
8	Environmental Health 8.1 Effects of Environmental Health 8.2 Effects of environmental pollution on human health -Air, water and solid waste pollution		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
9	Natural hazard and Disaster Management 9.1 Introduction 9.2 Types of Disasters 9.3 Causes and Effects of Disasters		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
10	Environmental management 10.1 National policy and acts 10.2 International Convention and Treaties on Environment		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
	Rivision-5 days			

**SYLLABUS: 2083**  
**MID TERM EXAMINATION**

**O. I Env. Sci.**

**Grade: 10**

Unit	Topic	Period	Teaching methods	Evaluation, techniques and tool
1	Introduction to Environment 1.2 Environmental Problems 1.3 Causes of Environmental Problems		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
2	Ecology and Ecosystem 2.3 Food Chain 2.4 Wetland ecosystem, types and importance of wetland 2.5 Main Wetlands of Nepal 2.6 Causes of degradation of Wetland 2.7 Conservation of Wetland		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
3	3.2 Biodiversity -Causes of loss of biodiversity -Impacts of biodiversity depletion -Endemic species of Nepal -Importance of endemic species 3.3 Conservation of Biodiversity 3.3.1 Approaches of conserving Biodiversity 3.3.2 In-situ Conservation 3.3.3 Ex-situ Conservation		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
4	Environmental pollution 4.2 Hazardous wastes and its management -Introduction, characteristics, sources, types, prevention, management		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
5	Climate change and its effects 5.1.4 Indigenous knowledge and promotion skills 5.1.6 NAPA Frame work		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
6	Alternative energy and its promotion in Nepal 6.1.8 Rural energy policy 2006 -Forest sector policies and Forest Act, 1992 6.1.10 Petroleum and natural gas policy 6.2 Current Institutional Situation 6.3 Institutional Approach		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
7	Environmental and Sustainable development 7.3 Sustainable development and forestry 7.4 Sustainable development and industry		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
8	Environmental Health 8.2.5 Noise pollution 8.3 Eco-friendly work stations 8.3.1 Environmental Study of a working area 8.3.2 Environmental of work place 8.3.3 Impact Of workplace Environmental On health		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
9	Natural hazard and disaster management 9.5 Disasters Management 9.6 Disaster management Challenges		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
10	Environmental Management 10.3 National and international Organizational 10.4 Approach of the Government of Nepal On Conservation Of Environment 10.5 Initial Environmental Examination(IEE		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test

Unit	Topic	Period	Teaching methods	Evaluation, techniques and tool
1	Introduction to Environment 1.4 Development of concept on Environment 1.5 Importance of study of development		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
2	Ecology and Ecosystem 2.7.1 Importance of conservation 2.7.2 Policy and conservation measures		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
3	Natural Resources and biodiversity of Nepal -Indigenous Knowledge in conservation 3.3.4 Contribution of local benefits in conservation 3.3.5 Attempt for the conservation of biodiversity		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
4	Environmental Pollution 4.3 Electronic Waste(E-Waste) -Introduction, Classification, Control of Hazards, E-Waste disposal method		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
5	Climate change and its effects 5.2 Worldwide programs in reducing Green house gases		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
6	Alternative Energy and its promotion in Nepal 6.4 Energy Organizations 6.5 Success Examples of Energy		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
7	Environment and Sustainable development 7.5 Indicators of Sustainable development in Nepal 7.6 Practices of sustainable development in Nepal		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
8	Environmental health 8.3.4 Effect on health due to Unhealthy Environment 8.4 Occupational health and safety		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
9	Natural Hazard and Disaster Management 10. Environmental Management 10.1 National Policy and Acts 10.2 International conventional		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test
10	Environmental Management 10.6 Environmental Impact Assessment(EIA)		Explanation, Field visit, Class discussion	Exercise as per text, Group Discussion, Project Work, Unit Test