

# Kadi Sarva Vishwavidhyalaya, Gandhinagar

## BCA Semester I

### BCA101 – Part 1 – Environment

### Environmental Studies

**Rationale :**Environmental Science is an interdisciplinary subject which draws on the content of several disciplines to offer a balanced scientific and holistic perspective of environmental issues. Its provides knowledge, skills and attitudes to identify, prevent and solve environmental problems and thereby prepares students for ultimate careers in diverse fields of relevance to environmental management and to sustainable development of the nation.

**Learning Outcomes:**

1. Stimulate interest in the environment
2. Understand the interdisciplinary and holistic nature of environment.
3. Develop knowledge and understanding of environmental issues and principles and the ability to apply this environmental management.
4. Provide and understand of interactions between people and the environment
5. Increase an awareness of the importance of leaving in harmony with the environment.
6. Develop and understanding of how natural resources and the environment affect the quality of life and the quest for sustainable development of nation.

**Teaching and Evaluation Scheme:**

Sub. Code	Sub. Type	Subject Title	Teaching Scheme		Exam Scheme				
			Cr.	Hrs. / Week	Theory		Practical		Total Marks
					Internal	External	Internal	External	
BCA 101	Environment	Environmental Studies	2	2	15	35	-	-	50

**COURSE CONTENT**

**Unit I** (50%)

- Definition, scope and basic principles of ecology and environment -2 Hrs.
- Natural Resources –Renewable and Non-renewable resources - 2 Hrs.
- Current environmental issues – climate change, Global warming, Acid rain, Ozone layer depletion – 4 Hrs.
- Pollution- Air, Water ,Soil , Marine , Thermal, Noise pollution- causes and effects – 4 Hrs.

**No. of lectures: 12**

**Unit II** (50%)

- Ecosystem : Basic concepts, components of ecosystem. – 1 Hr.
- Trophic levels, food chains and food web – 1 Hr
- Ecological pyramids, ecosystem functions. – 2 Hrs.
- Energy flow in ecological systems, energy efficiencies – 2 Hrs.
- Biogeochemical Cycles: Importance, gaseous and sedimentary cycles. Carbon, Nitrogen, Phosphorus, hydrogen and Sulphur Cycles. – 6 Hrs.

**No. of lectures: 12**

**References:**

1. Modi C D & others (2006) Paryavaran and Aapatti Vyavasthapan [Gujarati], Swami prakashan, Patan-384265
2. Patel J C (2006) Paryavaran and disaster management [Gujarati], Parshwa publication, Ahmedabad-380001
3. Erachs Bharucha (2008, first edition) Paryavaran Adhyayan [Gujarati], Orient Longman Pvt. Ltd., Hyderabad.
4. Distributor: M/S Himanshu book company, 06-07 Shri Jayendrapuri Bhavan, Ellisbridge, New Sanyas Ashram, Ahmedabad – 380 006.
5. K Ramana Murthi, 2004 Disaster Management, Dominant Publishers and Di stributors, New Delhi -110002

**Question Paper Scheme:**

University Examination	Duration: 1.5 Hours.	Total marks: 35
Q.1-Unit-I & II	Objective / Short Questions	(11 Marks)
Q.2-Unit-I	Descriptive / Long questions	(12 Marks)
Q.3-Unit-II	Descriptive / Long questions	(12 Marks)

Note: Q.2 and Q.3 must have at least 40% Internal Options (i.e. Attempt Any 3 out of 5)