



Bharatiya Seva Sadan's  
**Smt. Radhadevi Goenka College for Women**  
NAAC Reaccredited Grade B+ with CGPA 2.71  
Junior, Senior & Postgraduate Multi Disciplinary College  
Affiliated to Sant Gadge Baba Amravati University, Amravati . (M.S.)  
(Certified Minority Institution)

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*1.3.3. Percentage of students undertaking project work / field work /  
internship (Data for the Latest completed academic year)*

**Bachelor of Arts (B.A.) Field Work & Project Writing  
Program Details, List of Students & Syllabus  
Session: 2020-21**



## Criterion I : Curriculum Aspects




Estd. 1965

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### CERTIFICATE

This is to certify that the documents attached in Criterion I  
**Curricular Aspects** are verified and found correct to the best of my  
knowledge.

  
**Dr. Devendra Vyas**  
**Principal**  
PRINCIPAL  
Smt. Radhadevi Goenka College  
For Women, AKOLA.

Jr. College - Index 01.01.007 | UDISE - 27050117185 | College Code - 207

Near Neheru Park, Murtijapur Road, Akola 444001

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**Smt. Radhadevi Goenka College for Women, Akola**

**Aims, Goals, Objectives & Outcomes**

**Environmental Studies**

**Session: 2020-21**

**Introduction**

Environmental Studies is a compulsory course for all UG Semester IV th year Students. The aim of environmental studies is to develop a world population that is aware of and concerned about the environment and its associated problems and which has the knowledge, Skills, attitudes, motivations and commitment to work individually and collectively towards solutions of current problems and prevention. Environmental education is concerned with those aspects of human behavior which are more directly related to man's interaction with bio-physical environment and his ability to understand this interaction. To create awareness among today's generation on pressing environmental problems, the University Grants Commission (UGC) has made it mandatory for the universities to introduce a course in environmental studies and teach students about the eco-system, pollution and problems concerned with the environment

**Aims of Environmental Studies :**

- **Learn how to use resources sustainably**
- **Create awareness about preserving the environment**
- **Participate in the mass movement to protect nature**
- **Foster a healthy learning environment**
- **Pursue a full-time career in environment studies**

To sum up the importance of introducing environment studies in course curriculum, the objectives are mainly to help students realize the significance of natural resources and learn to develop solutions to pressing environmental problems. The aim should be developing a world where every individual is aware of and concerned about environmental issues and work towards creating sustainable strategies for the current situation and preventing future problems.

**Goals:**

- To provide students with a broad interdisciplinary liberal arts framework for understanding the relationship between humans and their environment;
- To provide students with informed perspectives on biological and physical processes relevant to environmental problems, to help students understand responsible environmental policy and practice, and to engage students in ethical reflection regarding environmental problems in local, regional, national, and global communities;
- To prepare students for careers, citizenship and environmental stewardship through experiential curricular and co-curricular opportunities;
- To equip students with the knowledge and skills necessary to pursue professional careers and advanced study related to the multi-faceted nature of environmental studies.

**Program Objectives**

- Students will integrate knowledge from multiple disciplines representing physical and life sciences perspectives, political and economic perspectives, and social and cultural perspectives on humans' interactions with their environments;

## ***Criterion I : Curriculum Aspects***

- Students will contribute to and facilitate interdisciplinary research and problem solving, through independent and collaborative work; and
- Students will use quantitative and qualitative research tools and techniques to analyze, implement, envision, assess, and report sustainability efforts

### **Learning Outcomes**

After completing the Environmental Studies, students will be able to:


- Articulate the interconnected and interdisciplinary nature of environmental studies;
- Gaining in-depth knowledge on natural processes that sustain life and govern economy.
- Demonstrate an integrative approach to environmental issues with a focus on sustainability;
- Developing critical thinking for shaping strategies (scientific, social, economic and legal) for environmental protection and conservation of biodiversity, social equity and sustainable development.
- Understand and evaluate the global scale of environmental problems; and
- Reflect critically on their roles, responsibilities, and identities as citizens, consumers and environmental actors in a complex, interconnected world.
- Predicting the consequences of human actions on the web of life, global economy and quality of human life.
- Acquiring values and attitudes towards understanding complex environmental economic-social challenges, and participating actively in solving current environmental problems and preventing the future ones.
- Adopting sustainability as a practice in life, society and industry

  
**EVS Subject In-Charge**

Dr. N. D. Chaudhari

Dr. A. J. Mutthe



  
**Principal**  
Radhadevi Goenka College  
For Women, AKOLA

## Criterion I : Curriculum Aspects

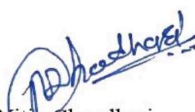



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### Environmental Studies Submission Report 2020-21

Environmental Studies is a compulsory subject for all II<sup>nd</sup> year (Annual) & VI<sup>th</sup> Semester UG Program. The following Environmental Studies Course enrolled students have successfully completed their project writing report & submitted to the subject teacher.

Sr. No.	Name of the Course
1	B.A. II Semester IV
2	B.Com. II Semester IV
3	B.Sc. (Home Science) II Semester IV
4	B.B.A. II Semester IV
5	B.C.A. II Semester IV

  
Dr. Nitin Chaudhari  
Asst. Prof. & Head  
Department of Economics  
Smt.R.D.G. College for Women,  
Akola

  
Dr. Devendra Vyas  
Principal  
Radhadevi Goenka College  
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## ***Criterion I : Curriculum Aspects***



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### **Environmental Studies**

**B.A. II Semester IV**

**Session: 2020-21**

#### **List of Students**

<b>Sr. No.</b>	<b>Name of the Students</b>
1	Aarti Devendra Wadekar
2	Aarti Sudhir Dhaktod
3	Aarti Sunil Ingle
4	Achal Baliram Ingle
5	Achal Mahendra Ingole
6	Achal Rambhau Kakad
7	Achal Vilas Khandare
8	Aiman Mohd Ataur Rahman
9	Aishwarya Rajesh Sirsat
10	Akanksha Ratan Jogadand
11	Akshata Hemant Joshi
12	Anchal Pradip Wankhade
13	Anjali Ajay Suryavanshi
14	Anjali Ashok Vishwakarma
15	Anjali Ganesh Ghawde
16	Anjali Hariprasad Sharma
17	Anjali Motilal Shahu

### ***Criterion I : Curriculum Aspects***

18	Anjali Pralhad Chandangole
19	Anjali Rajesh Bhagat
20	Anjali Shivdas Bawaskar
21	Ankita Nandu Vijaykar
22	Ankita Rahul Wankhade
23	Ankita Rajkumar Khandare
24	Apeksha Devanand Wankhade
25	Arati Santosh Khar
26	Archana Gajanan Bochara
27	Archana Pradip Khandare
28	Archana Rajendra Damodar
29	Arpita Mohan Bochara
30	Arti Pandurang Dhongade
31	Asha Sunil Nalgire
32	Ashvini Bhashkar Chakre
33	Ashvini Dharamsevak Shirsat
34	Ashvini Mahadeo Manekar
35	Ashvini Sanjay Shirsat
36	Ashwini Devanand Ingle
37	Ashwini Narayan Ingole
38	Ashwini Santosh Ghuge
39	Ashwini Subhash Wankhade
40	Ashwini Tejrav Sirsat
41	Ashwini Vishwanath Khobarkhede
42	Asmita Waman Kove
43	BABITA SHRAWAN EDAME

### ***Criterion I : Curriculum Aspects***

44	BHAGYASHALI RAMESH KOLHE
45	Bharati Ajab Dhoke
46	Bharti Gajanan Shelke
47	BHAVANA RAVINDRA GOPNARAYAN
48	BHAVANA SANJAY GOMASE
49	Chaitali Dinesh Wankhade
50	Chaitali Ishwar Mahalle
51	Chanchal Ashok Ingle
52	DAMINI DNYANESHWAR AGARKAR
53	DEVYANI RAVINDRA THOMBARE
54	DHANASHRI LAKSHMAN KAMBLE
55	DIKSHA JOGENDRA PAHURKAR
56	Diksha Kailas Bhojane
57	DIKSHA SUNIL SHIRSAT
58	Diksha Suresh Surwade
59	DIPALI SANTOSH INGLE
60	Dipali Subhash Pimpalkar
61	Dipali Vishanu Ingale
62	DIPTI SANTOSH SHARMA
63	Divya Gajanan Honale
64	Divya Gajanan Pradhan
65	DIVYA GAJANAN SAWARE
66	Divya Ganesh Rahane
67	Divya Gopal Ghogare
68	Divya Kisan Khade
69	Divya Mahendra Pillay

### ***Criterion I : Curriculum Aspects***

70	DIVYA MILIND KHANDARE
71	Divya Santosh Sapkal
72	DIVYA SUDHAKAR WANKHADE
73	DIVYA UTTAMRAO MHAISANE
74	DIVYA VILASRAO MANKAR
75	Divya Vinod Wankhade
76	DIVYA YASHAWANT SADAR
77	Dnyaneshwari Sunil Ghogare
78	DURGA RAJU SONI
79	Durgeshwari Shivaji Gawande
80	EKATA GANESH KHETKHEDE
81	Gauri Kishor Wadkar
82	Gauri Santosh Lavhale
83	Gauri Satish Wande
84	Gayarti Ashokrao Lokhande
85	Gayatri Prakash Pawar
86	Gayatri Rajendra Ingle
87	Gayatri Rajkumar Sharma
88	GAYATRI VINAYAK RAMBHAPURE
89	Girija Ajit Gawande
90	Harsha Ramesh Katankar
91	HRITIKA VASANTA GOPNARAYAN
92	JAYA LAXMAN AMBHORE
93	Jaya Rahul Damodar
94	JAYASHRI GAJANAN TAYDE
95	JAYSHREE SURESH KALMEGH

### ***Criterion I : Curriculum Aspects***

96	JAYSHRI SAMADHAN MORE
97	Jyoti Pralhad Zambre
98	Jyoti Raju Shirsat
99	JYOTI RAVINDRA PUNDGE
100	JYOTSANA MAHENDRA GAWAI
101	Kajal Madan Gupta
102	Kajal Wasudeo Wankhade
103	KALYANI ARUN BOKADE
104	Kalyani Balu Ghogare
105	KALYANI GOPALRAO GAWANDE
106	KALYANI PRAKASH SHIRSAT
107	Kamla Madhu Chavare
108	KANCHAN MAHADEO WANKHADE
109	Kanchan Uddhao Dhisale
110	KANCHAN VIJAY UKE
111	KAVITA RAJU BURE
112	Kiran Kalyan Raut
113	Kiran Rameshwar Shegokar
114	Kiran Sunil Kagokar
115	Kirti Dattatray Ingle
116	Komal Deorao Dabhade
117	Komal Mahadeo Kolase
118	KOMAL PRAKASH INGLE
119	KOMAL RAJENDRA INGLE
120	KOMAL RAJESH UMALE
121	KOMAL RAJU WAVARE

### ***Criterion I : Curriculum Aspects***

122	Komal Ramesh Dhole
123	KOMAL RAMKRUSHNA BODADE
124	KOMAL RANJUBABU DAMODAR
125	Komal Sanjay Dandale
126	Komal Sanjay Wankhade
127	Kshitija Manohar Deshmukh
128	KUMUD ANIL POHURKAR
129	Laxmi Amarnath Vishwakarma
130	Laxmi Bhaskar Deshmukh
131	LAXMI KISAN NAGARE
132	Laxmi Rajprasad Tiwari
133	LAXMI SOPAN SHINDE
134	Lugma Parveen Hanif Shaikh
135	Mamta Vinod Lokhande
136	Manali Siddharth Naik
137	MANGALA MAHADEO ZYATE
138	Manisha Vilas Pundge
139	Mansi Ashvin Bansod
140	Mayuri Ramdas Solanke
141	Mayuri Shrikrushna Bhongare
142	Mayuri Sudarshan Nawlalkar
143	Megha Subhash Jadhav
144	Megha Vinod Dige
145	Meghali Sanjay Mahajan
146	Mina Sanjay Damodar
147	Mohinee Vitthal Bhagat

### ***Criterion I : Curriculum Aspects***

148	MOHINI AVINASH WANKHADE
149	Mohini Vijay Nerkar
150	Monika Dharmendra Tayde
151	Nahid Parvin Naim Khan
152	Naina Sudesh Yadav
153	Naina Taterao Jadhao
154	Nandini Arun Uparikar
155	Nayana Sunil Awate
156	Neha Krushna Kakade
157	Neha Mangesh Dhore
158	Neha Pravin Labade
159	NEHA RAHUL UMALE
160	Neha Rajesh Dongare
161	NEHA SADANAND KALE
162	NEHA SANDIP KHANDARE
163	Neha Sanjay Dhore
164	Neha Santosh Sapkal
165	Neha Shreekrishna Ingle
166	NEHA SUDESH YADAV
167	Nikita Anil Navale
168	NIKITA DATTATRAY GAWANDE
169	NIKITA HARIDAS SOLANKE
170	Nikita Jaydevrao Rajgure
171	NIKITA NAGESH SATHE
172	NIKITA PRALHAD AGARKAR
173	NIKITA PRASHANT KHORE

### ***Criterion I : Curriculum Aspects***

174	NIKITA PUNDLIK RAUT
175	Nikita Rajesh Sirsat
176	NIKITA RAVINDRA PAWAR
177	NIKITA SHESHRAO INGLE
178	NIKITA SHRIDHAR KARALE
179	Nikita Vinod Khandare
180	NILAM RAHUL SHIRSAT
181	NISHA AMBADAS WAHURWAGH
182	Nisha Ramdayal Kewat
183	Nisha Ratan Arakhrao
184	NUTUN PANJABRAO TAYADE
185	Pallavi Arun Diware
186	Pallavi Babarao Tayade
187	PALLAVI DIGAMDAR CHAMBHATE
188	Pallavi Kashiram Thakare
189	Pallavi Mahendra Gopnarayan
190	PALLAVI RAMECHANDRA GHATOL
191	PALLAVI RAMESH WANKHADE
192	PALLAVI SHRIKRUSHNA TAYADE
193	Payal Panjabrao Chavan
194	PAYAL RAMESH GADGIL
195	Payal Shivprasad Bardiya
196	PAYAL SHRIKRUSHANA THAKARE
197	Pooja Dilip Dhandar
198	POOJA DINKAR KHETKHEDE
199	POOJA HARIDAS CHIKTE

### ***Criterion I : Curriculum Aspects***

200	Pooja Janrao Davale
201	POOJA RAJENDRA PATIL
202	POOJA RAMRAO KHANDARE
203	POOJA SUNIL BUNDELE
204	POONAM DAULAT SAHU
205	POONAM KESHAV BHOKARE
206	POONAM SURESH INGLE
207	PRACHI MOHANSING THAKUR
208	Pradnya Devendra Shamskar
209	Pragati Dinkar Nilkhan
210	PRAGATI KESHAVRAO SONTAKKE
211	Pragati Santosh Bobade
212	Pragati Siddharth Bharsakle
213	PRANALI VIJAY GAWALI
214	PRANJALI RANGRAO ATHAWALE
215	Pratibha Shriram Khetkar
216	Pratiksha Arun Joshi
217	Pratiksha Balu Tayade
218	PRATIKSHA SANTOSH MESHRAM
219	Pratiksha Satish Shastri
220	PRITI DILIP INGLE
221	Priti Dipak Athawale
222	Priti Santosh Arkharao
223	Priti Santosh Nage
224	Priti Wasudeo Babhulkar
225	Priya Gajanan Agarkar

### ***Criterion I : Curriculum Aspects***

226	PRIYA KISHOR YERMEKAR
227	PRIYA RAMESH INGOLE
228	PRIYA RAMESHWAR SARATE
229	PRIYA SANTOSH BUDH
230	Priya Santosh Ghorad
231	Priyanka Anil Jammik
232	Priyanka Gunwant Raut
233	Priyanka Laxmanarao Damodar
234	PRIYANKA PRAMOD KHANDARE
235	PRIYANKA SANJAY WANKHADE
236	PRIYANKA SHIVAJIRAO GAWANDE
237	Priyanka Vishwasrao Waghade
238	Priyanka Wamanrao Dongre
239	PUJA HARISHCHANDRA THAKARE
240	Puja Sanjay Damodar
241	PUJA SANTOSH TELGOTE
242	PUJA VASUDEV DEVAR
243	Purnabashi Sukant Prushthi
244	RADHATAI GOKUL ADHAU
245	RADHIKA VILAS DHORE
246	RAJNANDINI VASANT WANKHADE
247	RAJSHRI MOHAN THAKARE
248	Raksha Balwant Deshmukh
249	Rani Devidas Solanke
250	RANI PRAMOD KOTHALKAR
251	Rashmi Sunil Tayade

### ***Criterion I : Curriculum Aspects***

252	RASIKA RAJU TAYADE
253	RENUKA ASHOK SURYAWANSHI
254	Renuka Mahadev Bhargade
255	Renuka Sukhadeo Ambhore
256	Rinku Arun Wankhade
257	Rohini Ghansham Deokar
258	ROHINI MUKUNDA BODADE
259	Rohini Nagesh Gopnarayan
260	Rohini Rajendra Hinge
261	Rohini Sarangdhar Ghyare
262	ROSHANI BABARAO AMBHORE
263	ROSHNI SHANTARAM MASANE
264	Rupali Panjabrao Khandare
265	Rupali Vitthal Fufute
266	Rushali Purushottam Dhawale
267	RUTIKA ANAND BHALERAO
268	RUTIKA RAJENDRA GAWANDE
269	Rutika Rajesh Hirulkar
270	RUTUJA LAXMANRAO KAKAD
271	Rutuja Ramkrushan Ganjare
272	RUTUJA SANJAY KAWADKAR
273	Rutuja Sanjay Yadav
274	Rutuja Santosh Gawande
275	Rutuja Santosh Vijekar
276	RUTUJA SUKHALAL INGLE
277	SAHEBA SHAIKH FAROOQUE SHAIKH

### ***Criterion I : Curriculum Aspects***

278	Sakshee Ujjain Shirsat
279	SAKSHI ARUN SOLANKE
280	Sakshi Bhaurao Bhawane
281	SAKSHI DEVENDRA RAUT
282	Sakshi Machhindra Gawai
283	SAKSHI NARENDRA SAWAKE
284	SAKSHI NITIN SHEGOKAR
285	SAKSHI RAJENDRA KHARE
286	SAKSHI RAJESH DHANWADE
287	Sakshi Sunil Umbarkar
288	Sakshi Vasant Borde
289	SAMIKSHA ANIL BELE
290	Samiksha Sagar Ingle
291	SANGEETA VIJAYSHANKAR MISHRA
292	SANJANA DADARAO DHAWALE
293	SANJANA SUKHANANDAN WANKHADE
294	SAPNA GAJANAN CHABUKSWAR
295	Sapna Ramesh Adhau
296	Sarala Subhash Bhojane
297	Sarika Samadhan Sasane
298	SAWALI SURESH WANKHADE
299	SHALINI SAMADHAN WANKHADE
300	SHARAYU RAVINDRA THOMBARE
301	SHARVARI SURESHCHANDRA DONGRE
302	SHEJAL BABARAO WANKHADE
303	SHEJAL DILIP TAYADE

### ***Criterion I : Curriculum Aspects***

304	SHEJAL VIJAY WAITKAR
305	SHILPA DIGAMBAR ARAKHARAO
306	SHILPA SURESH WANKHADE
307	Shital Diliprao Wakode
308	Shital Raju Wankhade
309	SHITAL RAMDAS INGLE
310	Shital Siddharth Shirsat
311	Shital Vitthal Dutonde
312	SHIVANI KAILAS MUNDALE
313	Shivani Krushnan Kopul
314	SHIVANI PRAKASH GORVE
315	Shivani Ruprao Gawande
316	SHIVANI SHANTARAM NEMADE
317	SHIVANJALI NILKANTH TAMBE
318	SHIVKANYA DASHARATH GAYKWAD
319	Shraddha Bharat Gawai
320	Shraddha Dilip Ingle
321	SHRADDHA MOHAN MISHRA
322	Shraddha Samadhan Lahudkar
323	Shraddha Sanjay Sable
324	Shradha Omprakash Murunkar
325	Shreya Gopalrao Ghanmode
326	SHREYA VIJAY JOHARLE
327	Shubhangi Bhagirath Karwate
328	SHUBHANGI PRABHU TAYADE
329	SHUBHANGI SURESH HIWRALE

### ***Criterion I : Curriculum Aspects***

330	Shweta Gajanan Yeutkar
331	SIMA PRABHU THAKRE
332	Smital Rajesh Kalambe
333	SNEHA MANOHAR WANJARI
334	Sneha Prabhakar Bache
335	SNEHA SHRIKRUSHNA GAYAKWAD
336	Sneha Vishvasrao Thakare
337	SNEHAL UKARDA HUSE
338	Sonal Baban Ingole
339	Sonal Rajesh Malani
340	Sonal Rajesh Wankhade
341	SONALI BHAURAO DAMODAR
342	SONALI RAJESH SHINDE
343	Sonali Ramesh Kalore
344	SONALI SURESH MANKAR
345	Sulochana Suresh Chape
346	Sunaina Antim Kori
347	SUPRIYA SHRIKRUSHNA TELGOTE
348	SUSHAMA BABURAO INGLE
349	Sushila Bhimrao Nande
350	Sushma Bhimrao Khandare
351	SWATI GANESH KHULE
352	SWATI RAJESH SAGALE
353	SWATI RAMSING MALVE
354	TEJASVINI VASUDEV BHANDE
355	Tejaswini Santosh Nilkhan

### ***Criterion I : Curriculum Aspects***


356	TEJSWINI ARUN WAKODE
357	Tina Dilip Dhameliya
358	TULSI DINKAR LEKHANAR
359	Vaishali Dewanand More
360	Vaishali Madhukar Chakre
361	Vaishali Manohar Meshram
362	VAISHALI RAMESH DIWNALE
363	VAISHALI SANTOSH SHIRSAT
364	VAISHALI SUDHAKAR INGLE
365	Vaishnavi Birsing Daberao
366	VAISHNAVI ANANDA PAGRUT
367	Vaishnavi Ashok Damodar
368	VAISHNAVI BHANUDAS KORDE
369	VAISHNAVI GAJANAN ZATALE
370	VAISHNAVI LALKRUSHNA INGLE
371	Vaishnavi Murlidhar Bhawane
372	VAISHNAVI NAMDEO SHAHAPURE
373	Vaishnavi Nandkishor Nage
374	Vaishnavi Narayan Pawar
375	Vaishnavi Pandurang Diwnale
376	Vaishnavi Prabhakar Mangale
377	VAISHNAVI PRAKASH BORDE
378	Vaishnavi Prakash Ghatole
379	Vaishnavi Pravin Nile
380	VAISHNAVI RAMESH BUNDE
381	VAISHNAVI RAVINDRA LENDE


### ***Criterion I : Curriculum Aspects***

382	VAISHNAVI SANJAY JOSHI
383	Vaishnavi Sopanrao Shinde
384	VAISHNAVI SURESH AMRUTKAR
385	Vaishnavi Vilas Band
386	Valerie Griffin Alphonso
387	Varsha Bhikaji Shirsat
388	VARSHA DILIP KASBE
389	Varsha Kashiram Devkar
390	Varsha Vishwanath Kakade
391	VIDITA VIJAY INGOLE
392	VIDYA DIPAK WAGH
393	Vijeta Devrao Gawai
394	VINITA RAJENDRA SHEGOKAR
395	Vishakha Rahul Tayade
396	VRUSHALI MANIKRAO SIRSAT
397	Vrushali Rajesh Dongre
398	Yogita Ananta Kharate
399	Yogita Dnyaneshwar Gawande
400	YOGITA GANESH NIKHADE
401	Yogita Manohar Patond
402	Zeba Javeriya Sadique Mohammad
403	Vaishnavi Pravin Kale
404	Vaishnavi Rajesh Waghade
405	Vaishnavi Rajkumar Paraskar
406	Vaishnavi Ravindra Mahalle
407	Vaishnavi Sahebrao Baghe

## ***Criterion I : Curriculum Aspects***

<b>408</b>	Vaishnavi Santosh Ghogare
<b>409</b>	Vaishnavi Santosh Kale
<b>410</b>	Vaishnavi Santosh Pardeshi

  
Dr. Nitin Chaudhari  
Asst. Prof. & Head  
Department of Economics  
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Akola

  
Dr. Devendra Vyas  
Principal  
Radhadevi Goenka College  
For Women, AKOLA

**Sant Gadge Baba Amravati University, Amravati**

**Environmental Studies**

**B.A. IV<sup>th</sup> Sem.**

**Syllabus**

**27. ENVIRONMENTAL STUDIES**

**Total Marks : 100**

**PART-A**

**SHORT ANSWER PATTERN**

**25 Marks**

**1. The Multidisciplinary nature of environmental studies**

- . Definition, scope and importance.
- . Need for public awareness.

(2 lecture hours)

**2. Social Issues and the Environment**

- . From Unsustainable to Sustainable development
- . Urban problems related to energy
- . Water conservation, rain water harvesting, watershed management
- . Resettlement and rehabilitation of people; its problems and concerns. Case studies.
- . Environmental ethics : Issues and possible solutions.
- . Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case studies.
- . Wasteland reclamation.
- . Consumerism and waste products.
- . Environment Protection Act.
- . Air (Prevention and Control of Pollution) Act.
- . Water (Prevention and Control of Pollution) Act.
- . Wildlife Protection Act.
- . Forest Conservation Act.
- . Issues involved in enforcement of environmental legislation.
- . Public awareness.

(7 lecture hours)

**3. Human Population and the Environment**

- . Population growth, variation among nations.
- . Population explosion - Family Welfare Programme.
- . Environment and human health.
- . Human Rights.
- . Value Education.
- . HIV / AIDS.
- . Women and Child Welfare.
- . Role of Information Technology in Environment and human health.
- . Case Studies.

(6 lecture hours)

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**PART-B**  
**ESSAY TYPE WITH INBUILT CHOICE**

**50 Marks**

**4. Natural resources :**

**Renewable and non-renewable resources :**

- . Natural resources and associated problems.
  - Forest resources : Use and over exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.
  - Water resources : Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.
  - Mineral resources : Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
  - Food resources : World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer - pesticide problems, water logging, salinity, case studies.
  - Energy resources : Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources, Case studies.
  - Land resources : Land as a resource, land degradation, man induced landslides, soil erosion and desertification.
- . Role of an individual in conservation of natural resources.
- . Equitable use of resources for sustainable lifestyles.

(8 lecture hours)

**5. Ecosystems**

- . Concept of an ecosystem.
- . Structure and function of an ecosystem.
- . Producers, consumers and decomposers.
- . Energy flow in the ecosystem.
- . Ecological succession.
- . Food chains, food webs and ecological pyramids.
- . Introduction, types, characteristic features, structure and function of the following ecosystem :-
  - Forest ecosystem
  - Grassland ecosystem
  - Desert ecosystem
  - Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

(6 lecture hours)

**6. Biodiversity and its conservation**

- . Introduction - Definition : genetic, species and ecosystem diversity.
  - . Biogeographical classification of India.
  - . Value of biodiversity : consumptive use, productive use, social, ethical, aesthetic and option values.
  - . Biodiversity at global, National and local levels.
  - . India as a mega-diversity nation.
  - . Hot-spots of biodiversity.
  - . Threats to biodiversity : habitat loss, poaching of wildlife, man-wildlife conflicts.
  - . Endangered and endemic species of India.
  - . Conservation of biodiversity : In-situ and Ex-situ conservation of biodiversity.
- (8 lecture hours)

**7. Environmental Pollution**

- . Definition
    - . Causes, effects and control measures of :-
      - Air pollution
      - Water pollution
      - Soil pollution
      - Marine pollution
      - Noise pollution
      - Thermal pollution
      - Nuclear hazards
  - . Solid Waste Management : Causes, effects and control measures of
    - . Role of an individual in prevention of pollution.
    - . Pollution case studies.
    - . Disaster management : floods, earthquake, cyclone and landslides.
- (8 lecture hours)

**PART-C**

**ESSAY ON FIELD WORK**

**25 Marks**

**8. Field work**

- . Visit to a local area to document environmental assets - river / forest / grass land / hill / mountain
  - . Visit to a local polluted site - Urban / Rural / Industrial / Agricultural
  - . Study of common plants, insects, birds.
  - . Study of simple ecosystems - pond, river, hill slopes, etc.
- (5 lecture hours)

- (Notes :**
- i) Contents of the syllabys mentioned under paras 1 to 8 shall be for teaching for the examination based on Annual Pattern.
  - ii) Contents of the syllabys mentioned under paras 1 to 4 shall be for teaching to the Semester commencing first, and
  - iii) Contents of the syllabys mentioned under paras 5 to 8 shall be for teaching to the Semester commencing later.

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- 9) Hawkins R.E., Encyclopedia of Indian Natural History, Bombay Natural Histroy Society, Mumbai (R)
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