

Instructions for AECC – 2 (Environmental Studies)

[Theory and project submission]

for

All Semester II B.A/B.Sc/B.Com Semester students

Dear students,

as you can understand that in this pandemic situation with the total closure of the college, it is not possible for us to hold classes for all students of the Semester 2, for the course AECC-2 (Environmental Studies), not even using online platforms. However, in this context we have decided that **we will upload some lecture notes** to the college website topic wise covering the whole syllabus. Also, we are going to suggest you a few textbooks in both English and Bengali language which may be useful for you.

Here in this introductory lecture, I am going to give you a brief on the syllabus and pattern of the paper.

Total number of Units = 08 [Including 7 theory and 1 fieldworks / practical paper]

The syllabus is given in the page no. 4 of this document.

The AECC – 2 Paper is having three sections similar to those of other courses.

Theory : 50 Marks [MCQ type – there will be 25 questions carrying 2 marks each]

Project/ Fieldwork: 30 Marks [You have to submit a project work following the guideline given in the next page].

Internal Assessment: 20 Marks [10 marks on the basis of internal examination & 10 on attendance]

Names of some books:

For Bengali: *Paribesh Bidya* by Rajarshi Mitra and Moumit Roy Goswami [Progressive publishers]

Paribesh by Anish Chattopadhaya [TD Publication]

For English: Environmental Studies for UG courses by Erach Bharucha [UGC].

Fundamentals of Environmental Studies by Basu and Xavier [Cambridge]

Environmental Studies: MCQ by Arun K Tripathi [TERI]

The books are available online in www.amazon.in and www.buybooks.co.in

Instructions for AECC – 2 Project submission
(Compulsory Environmental Studies)
for
All Semester II B.A / B.Sc / B.Com Semester students

INSTRUCTIONS FOR PROJECT WORK:

Prepare a project on **ANY ONE** of the subjects **as per the prototypes** given. The project should be unique for individual students or a group of students not more than 8 students.

The project report **should not be** less than 6 and more than 10 pages (including title page) and be submitted as a single pdf. File.

In case of hand written projects scan the pages and accommodate in a single “.pdf ” file and in case of type written prepare a “.pdf” file

[NO WORD DOCUMENT or IMAGE FILES LIKE jpeg. bmp. png. etc. will be entertained]

The title page of the project report must have **CU Roll number and Registration Number** [These are the same as that of Semester 1] only.

No name or any kind of identification mark of the students concerned should be there. (A sample title page is attached below in Page 3)

Projects are to be submitted through the college portal as notified in the college website.

The date of submission and the link for the same will be notified in college website.

For any other query may write to envs.vc@gmail.com .

Write **Query on AECC-2_2021** in the subject line.

Please DON'T CALL any teacher personally over phone or through WhatsApp even if you have the number.

BA/ BSc./ B.Com
2nd Semester (CBCS system) Examination 2021

AECC – 2 Project Report

CU Roll No. : _____

CU Registration No.: _____

University of Calcutta

Under Graduate Curriculum under Choice Based Credit System (CBCS)

Syllabus for Ability Enhancement Compulsory Course-2 (AECC-2) in

Environmental Studies

Semester-2

Total Marks-100(*Credit -2*)

[Marks obtained in this course will be taken to calculate SGPA & CGPA]

Theory

Unit 1

Introduction to environmental studies

Multidisciplinary nature of environmental studies;
Scope and importance; Concept of sustainability and sustainable development.

Unit 2

Ecology and Ecosystems

- Concept of ecology and ecosystem, Structure and function of ecosystem; Energy flow in an ecosystem; food chains, food webs; Basic concept of population and community ecology; ecological succession.
- Characteristic features of the following:
 - Forest ecosystem
 - Grassland ecosystem
 - Desert ecosystem
 - Aquatic ecosystems (ponds, streams, lakes, wetlands, rivers, oceans, estuaries)

Unit 3

Natural Resources

- Concept of Renewable and Non-renewable resources
- Land resources and land use change; Land degradation, soil erosion and desertification.
- Deforestation: Causes, consequences and remedial measures
- Water: Use and over-exploitation of surface and ground water, floods, droughts, conflicts over water (international & inter-state).
- Energy resources: Environmental impacts of energy generation, use of alternative and nonconventional energy sources, growing energy needs

Unit 4

Biodiversity and Conservation

- Levels of biological diversity: genetic, species and ecosystem diversity;
 - Biogeographic zones of India; Biodiversity patterns and global biodiversity hot spots
 - India as a mega-biodiversity nation; Endangered and endemic species of India
 - Threats to biodiversity: Habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions;
 - Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.
 - Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and Informational value.
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Unit 5**Environmental Pollution**

- Environmental pollution: concepts and types,
- Air, water, soil, noise and marine pollution- causes, effects and controls
- Concept of hazards waste and human health risks
- Solid waste management: Control measures of Municipal, biomedical and e-waste.

Unit 6**Environmental Policies and Practices**

- Climate change, global warming, ozone layer depletion, acid rain and their impacts on human communities and agriculture
- Environment Laws: Wildlife Protection Act; Forest Conservation Act. Water (Prevention and control of Pollution) Act; Air (Prevention & Control of Pollution) Act; Environment Protection Act; Biodiversity Act.
- International agreements: Montreal Protocol, Kyoto protocol and climate negotiations; Convention on Biological Diversity (CBD).
- Protected area network, tribal populations and rights, and human wildlife conflicts in Indian context.

Unit 7**Human Communities and the Environment**

- Human population growth: Impacts on environment, human health and welfare.
- Case studies on Resettlement and rehabilitation.
- Environmental Disaster: Natural Disasters-floods, earthquake, cyclones, tsunami and landslides; Manmade Disaster- Bhopal and Chernobyl.
- Environmental movements: Bishnois, Chipko, Silent valley, Big dam movements.
- Environmental ethics: Role of gender and cultures in environmental conservation.
- Environmental education and public awareness

Project/ Field work

- Visit to an area to document environmental assets: Natural resources/flora/fauna, etc.
- Visit to a local polluted site-Urban/Rural/Industrial/Agricultural.
- Study of common plants, insects, fish, birds, mammals and basic principles of identification.
- Study of ecosystems-pond, river, wetland, forest, estuary and agro ecosystem.

Total
