

**Open Basic Education Course
Environmental Studies (B-102)
Level- 'B'**

1. Rationale

The course at level 'B' is based on the course at level 'A' already studied by the learners. To expand the knowledge of the learner beyond course at level 'A' it is important to provide them advance study material, so that they will be able to join higher levels of education.

In order to make the learners good citizens of the country and positive contributors to the society, it is important to make them more aware of our country, our civilization and culture, issues plaguing our society, and the environmental concerns. This course of Environmental Studies (B-102) at Level- 'B' has been designed to include all such issues.

2. Prerequisites for the course

Before entering this course the learner is expected to complete the Open Basic Education Course at level 'A' successfully or have equivalent knowledge

3. Objectives

The general and specific objectives of the course are as following-

3.1 General Objectives

After completing this course successfully the learners will be able to-

- Express their views on all topics of concern in their surroundings.
- Examine varied and rich cultural heritage of India.
- Recognize their responsibility towards ancient heritage and act accordingly.
- Suggest all possible efforts to eradicate social evils and contribute towards making of a clean, aware and co-operative society.
- Be inspired to have scientific outlook towards agriculture and other daily activities in which they are involved.
- Become aware of their right to vote, how to use it and contribute towards making a strong democracy.
- Become valuable assets for the society.
- Will be able in expand their vocabulary.
- Prepare themselves mentally well to gain, accept and use new information
- Perform the role of useful and productive citizens of the country.

3.2 Specific Objectives

After completing this course successfully the learners will be able to-

- Explain about the composite culture of India and its importance.

- Describe India's natural resources and conservation of these resources.
- List the important heritage of India.
- Understand the concept of peace and benevolence and absorb it.
- Recognize the concept of small family
- Discuss social concerns like- Female child education, female foeticide, dowry etc. and to gain more information about them and general laws related to them.
- Illustrate about the freedom movement of the country and role of freedom fighters in it.
- Explain about different states of India, their natural resources, main crops, vegetations etc.
- Identify democratic form of governance in the country and importance of voting in elections.
- List out different aspects of environment conservation
- Add new scientific information to their prior knowledge about soil, crops, and agriculture.
- Review the importance of energy in their lives, ways of energy conservation and alternative sources of energy
- Expand their knowledge about planets and satellites.
- Identify different diseases, their reasons, precautionary measures to avoid them and cures.
- Indicate the internal organs of human body and their functions.
- Suggest utilization and various ways of disposing off waste material.

4. Brief Description of the Course

The present course has been developed in simple language and the examples and instances have been taken from everyday life. It has been developed in the distance learning mode.

The entire course has been divided into 15 lessons. Each lesson has been divided into topics and sub-topics and easy for the learner to study, various ways of self-assessment techniques have been used in the lessons.

5. Course Structure

The study time for this course is 100 hours. This course has been divided into four modules and 15 lessons. The description of study hours and allotted marks is as following-

Sl. No.	Module	Lesson No.	Study Hour	Marks
1.	Our Culture and Heritage	1-3	20 hours	20

2.	Our India	4-6	20 hours	20
3.	Our Environment	7-11	35 hours	35
4.	Our Body & Health	12-15	25 hours	2
	Total		100 hours	100

6. Course Description

Lesson-1: Conservation and Respect of Indian Cultural & Natural Heritage

1. Significance of India's composite culture and necessity for its protection
2. Historical heritage, its importance and conservation
3. Natural resources of India- forest, flora & fauna, water resources, and mineral resources-their importance and conservation

Lesson-2: Peace, Unity and cultural amalgamation in Indian Society

1. Linguistic, cultural and social diversity in India
2. Threads of unity amidst diversity
3. Importance of peace and unity and our responsibility
4. Peace, unity and goodwill policies initiated by emperors Asoka and Akbar

Lesson-3: Our Social Concerns

1. Concept and importance of small family (family planning)-Our Responsibility
2. Importance of education, female child education-Our Responsibility
3. Necessity of gender equality, reasons for inequality, laws for women rights and empowerment
4. Dowry- its Reasons, ill effects of this malpractice, Dowry prohibition act-1961, *Stridhan*, Provisions for punishment under dowry prohibition law

Lesson-4: Our Freedom Struggle

1. Establishment of British rule in India and the era of slavery
2. Freedom movement, important revolutionaries- their struggle and attainment of freedom

Lesson-5: States of India and their Natural Features

1. States and Union territories of India.
2. India's position on the World map, Its natural features and resources
3. Various crops and plants of India

Lesson-6: Our Community and Public Administration

1. Indian Democracy and mode of Governance- Legislative, Executive and Judiciary
2. Rural Public Administration- Village Panchayat, Area Panchayat, District Panchayat, Constitution of these Panchayat-Function & Tenure

3. Urban Public Administration- City Administration, Municipal Council, Municipal Commission- Their Constitution, Function and Tenure

Lesson-7: Plant and Animal Life

1. Interdependency between Plants and Animals & Food Chain
2. Importance of Natural equilibrium, ill effects of imbalance in Nature
3. Conservation of Environment, Forests and Wild Animals

Lesson-8: Soil and Crops

1. Significance of Soil, types of soil and different types of crops cultivated in them
2. Important agricultural activities for cultivation of crops- Preparing the land, Sowing, seed protection, weeding, irrigation, manures & fertilizers, crop protection, harvest
3. Crops cultivated according to particular seasons- Rabi, Kharif, & jayad

Lesson-9: Soil & Forest Conservation

1. Soil erosion and its ill effects, Reasons of Erosion and Preventive measures
2. Role of Forest Conservation in preventing Soil Erosion
3. Ill effects of Soil Pollution- Reasons, Preventive measures especially with regard to Bio-agriculture.

Lesson-10: Sources of Energy and their Significance

1. Need and Importance of Energy
2. Sources of Energy- Exhaustible & non-Exhaustible
3. Types of Energy- Energy from Food, Solar Energy, Wind Energy, Water Energy, Bio-Energy, Electrical Energy, and Magnetic Energy
4. Use of alternative sources of Energy and measures for saving Energy

Lesson-11: Solar System & the Earth

1. Solar System, Planet and Satellites and their qualities
2. Phases of the Moon & cycle of dates in accordance
3. Differences between Natural & Artificial Satellites, Significance & utility of artificial Satellites
4. Introduction to Earth- Lines of Longitude & Latitude, Knowledge of Time on the basis of Latitude
5. Expansion and Contraction of time in Day-Night cycle, Positions of 21 June, 22 December, 21 March & 23 September

Lesson-12: Food & Health

1. Deficiency diseases-Diagnosis & Prevention- Anemia, Kwashiorkor, Marasmus, Night Blindness, Goiter, Mental slowness/slow mental development, and Beriberi
2. Inexpensive Nutritious Food, Conditions in which food intake should be carefully monitored
3. Storage of Food Items- Drying & cooling, with spices and oil, with chemicals, by cooking, freezing, staking in boxes

Lesson-13: Internal Organs of Human Body

1. Knowledge of Internal Organs of Human Body & their Importance
2. Main parts of Skeleton and their functions, Types & Functions of Muscles
3. Digestive System- Mouth, Food Pipe, Stomach, Small intestine, Large intestine, Rectum, & Liver and their functions
4. Structure, Functions and Significance of the Lungs
5. Structure, Functions and Significance of the Heart
6. Structure, Functions and Significance of the Kidneys
7. Structure, Functions and Significance of the Brain
8. Structure, Functions and Significance of the Reproductive Organs in Human Male & Female

Lesson-14: Common Diseases- Their Reasons, Preventive measures & Safety

1. Contagious and Non-Contagious Diseases
2. Main Contagious / Communicable Diseases- Symptoms, Reasons and Preventive Measures- Diarrhoea, Malaria, Cholera, Dengue, Elephantiasis, Typhoid, Tuberculosis (T.B.), Common cold, Influenza, Pneumonia, HIV-AIDS
3. Some Non-Contagious/Non-Communicable Diseases-Symptoms, Reasons and Prevention- Heart Attack, Diabetes, Cancer
4. Main Preventive measures for warding off Diseases- Hygiene, being careful while handling patients suffering from communicable diseases, vaccination, not indulging in tobacco, alcohol and drugs

Lesson-15: Disposal of Waste Material

1. Categories of Waste materials
2. Disposal of waste material on the basis of their nature and characteristics, different waste basket for bio-degradable and non-bio-degradable waste
3. Clean Environment-Our Responsibility

7. Scheme of Study

This course is essentially for self-study. The course material has been prepared keeping in mind the social, psychological & intellectual conditions of the intended learners. As the course is designed for self-study therefore at the end of each lesson, questions related to the lesson are given, so that learners are able to develop concepts as well as learn to express them well through writing.

Learners also have the option of attending contact classes at their AIs, learners will be able to clarify any subject related doubts in these classes as well as discuss them with their peer group. Learners can also clarify their subject related problems at literacy centre and adult education centre.

8. Scheme for Evaluation

8.1 Self-Assessment

Learner can continue their evaluation throughout the course. For this purpose a scrutiny/ question paper is provided after every three lessons, which contains questions related to those three lessons. Learners can answer these questions and then evaluate their answers by looking at the correct answers provided at the end. This is the self-assessment method adopted for this course.

8.2 External Assessment

After completing the course the learner will appear in the external evaluation. The method for this evaluation is written examination, which will consist of 100 marks. The duration of this exam will be three hours and question paper will comprise questions based on lessons and concepts in them. The questions will be objective type, very short answer type, short answer type, and long answer type.

Open Basic Education Course
Mathematics (B-103)
Level- 'B'

1. Rationale

Mathematics is a very important subject at level 'B' of Open Basic Education (Adult) course. By learning about concepts of Mathematics the learners will acquire the ability to mitigate the known and unknown challenges in the world around. Mathematics helps in development of objective, critical and analytical thinking . At this level study of Mathematics will make the learner adept at critical thinking & problem solving, and taking rational decisions while strategizing work. The present course has been designed to enable learners in applying concepts of Mathematics to real life situations.

2. Prerequisites for the course

Before entering this course the learner is expected to complete the Open Basic Education Course at level 'A' successfully or have equivalent knowledge

3. Objective

On successfully completing this course the learners will be able to-

- Explain the fundamental concepts, theory, signs, equations, and formulae and related things
- Express the principles of measurement and use them in everyday life.
- To solve queries put in words in form of Mathematical equations
- Appraise positive outlook towards Mathematics and its concepts
- Use Mathematics in everyday life.
- Evaluate their Mathematical skills and prepare for further study.
- To cultivate self-confidence in the learners so that they can play a positive role in education of coming generations.

4. Course Structure

The Open Basic Education (Adult) course level 'B' in Mathematics has been divided into eight lessons. All the lessons contain various topics. Number of lessons, suggested study time and marks allotted to each lesson is as following-

Sl. No.	Lesson	Study Time	Marks
1.	Numbers	10 hours	10
2.	Addition, Subtraction, Multiplication & Division	20 hours	20
3.	Fractions	15 hours	15
4.	Decimal	15 hours	15

5.	Mensuration	15 hours	15
6.	Perimeter, Area, & Volume	10 hours	10
7.	Geometry	10 hours	10
8.	Statistics	05 hours	05
	Total	100 hours	100

5. Course Description

Lesson-1: Numbers

Reading, and writing numbers from 1001 (one thousand one) till 1, 00, 00,000 (one crore) in figure and words. Learning the value of each digit based on its place in a given number, expanded form of numbers, comparing numbers, writing numbers in ascending order and descending order, and making smallest possible and biggest possible number (in terms of value) from the given digits.

Lesson-2: Addition, Subtraction, Multiplication & Division

Adding and subtracting numbers, doing multiplication and division with numbers having up to three digits. Practicing multiplication and division. Solving everyday problems by using basic processes of addition, subtraction, multiplication, and division.

Lesson-3: Fractions

To know about fraction and to read, write and understand fractions, to understand fractions through pictures, to make fractions in comparison to the given fraction, to represent fractions in their lowest denomination, comparing fractions, understanding and writing fractions in ascending order and descending order, to distinguish mixed fraction from unequal fraction and converting them into each other, to do addition, subtraction, multiplication and division of fractions and to solve everyday problems comprising fractions by using the acquired knowledge.

Lesson-4: Decimal

Concept of Decimal, expressing fractions consisting of 10, 100, 1000 etc. as decimal, converting decimals into fractions and vice-versa, comparing decimals and writing them in ascending and descending orders, doing addition, subtraction, multiplications and divisions with decimals, understanding 100 in decimal as percentage, converting decimals into percentage and vice versa, converting measurement given in one unit to the highest or lowest form of that unit, use of decimals in everyday life.

Lesson-5: Mensuration

Uses of mensuration in everyday life, knowledge of length measurement unit, unit of measurement of weight, units for measurement of containing capacity, unit for measurement of heat, unit for measurement of time, knowledge of Indian currency, problems of addition, subtraction, multiplication & division related to units of measurement for different things, everyday problems related to mensuration.

Lesson-6: Perimeter, Area, and Volume

Meaning and usages of perimeter, finding perimeter of plain surfaces, meaning and usages of area, finding area of plain surfaces, meaning and usages of volume, finding volume of solid structures.

Lesson-7: Geometry

Different objects around us, the meaning of similarity and to recognize similar objects around, curve line, simple/straight line, recognizing line segment and ray, recognizing different angles in different structures, recognizing angles as similar angles, greater angles and smaller angles, to draw and measure angles with help of a protractor, a circle, to draw a circle using compass and without it, understand the concepts of terms related to geometry of circle like, centre, circumference, radius, and diameter, and parallel and non-parallel lines around.

Lesson-8: Statistics (managing the data)

What is data, what is the need for it, ways of collecting data, managing the collected data, understanding and representing data as pictorial images, analyzing data and getting results from them.

6. Scheme of Study

This course is essentially for self-study. The course material has been designed keeping in mind the social, psychological & intellectual conditions of the learners. At the end of each lesson, questions related to the lesson are given, so that learners are able to understand concepts as well as learn to express them.

Learners also have the option to attending contact classes at their AAs, learners will be able to clarify any subject related doubts in these sessions and discuss difficult topics with their peer group. Learners can also clarify their subject related problems at the literacy centre and adult education centre.

7. Scheme of Evaluation

7.1 Self-Assessment

Learner can keep doing their evaluation throughout the course. For this purpose a practice paper is provided after every lesson, which contains questions related to the

lesson. Learners can answer these questions and then evaluate their answers by looking at the correct answers provided at the end. This is the self- evaluation method adopted for this course.

7.2 External Assessment

After completing the course the learner will appear for external evaluation. The method for this evaluation is written examination, which will consist of 100 marks. The duration of this exam will be three hours and question paper will comprise questions based on lessons and concepts in them. The questions will be objective type, very short answer type, & short answer type.

Open Basic Education Course
Basic Computer Skills (B-104)
Level- 'B'

1. Rationale

India is a rapidly growing and developing nation. The growth should be multifaceted and even for it to be meaningful for all. With the advent of computers the world moved to a new age-cyber age. The unprecedented amount of growth that the world has seen since information technology revolution is unparalleled in history. Computers have taken over almost all spheres of human existence be it Offices, Homes, Hospitals, Railway stations, Universities or Schools. Therefore it is imperative for all of us to have computer skills, if not advanced at least basic skills, so that we are able to handle computers properly and for our benefit. This course in Basic computer skill at level 'B' is centered on knowledge about computers and application of that knowledge in everyday life.

2. Prerequisites for the course

Before entering this course the learner is expected to –

- Have successfully completed the Basic computer skills course at level 'A' or have similar competence.
- Recognize all the parts of computer & its attachments like printer etc.
- Know use of all the parts of computer and other attachments
- Know how to use a computer
- Know usage of paint-brush application in computer, its usage and to be able to use it to make and colour images.
- Use word programme successfully to type letters and applications
- Be able to make folders to keep and save files

3. Objectives

The general and specific objectives of this course are as follows-

3.1 General Objective

After successfully completing this course the learner will be able to use a computer independently and make with ease tables, pictures & documents, type letters and mail them, make presentation using a spreadsheet and make calculations using it, take printouts, make presentation using texts on computer, use internet to access information, be aware of need for computer & internet security, also be aware of ways to detect and protect from malware & viruses, to know about benefits and threats of internet and internet enabled services.

3.2 Specific Objectives

After successfully completing this course the learner will be able to-

- Insert tables, pictures etc. into the document
- To type document in Hindi
- To send a single document to many people
- Use spreadsheet to solve simple Mathematical problems and take a printout.
- Effectively place text, images/pictures & tables while making a presentation
- Demonstrate the functioning of internet and effectively use it to search information and give and receive information
- Explain the benefits of email and to send mails to others

4. Brief Description of the Course

This course has been divided into seven lessons. Each lesson explains various parts of computer, its uses and applications using that knowledge.

5. Course Structure

This course comprises of total 100 study hours. It has seven lessons. The course is divided on the basis of study hours and marks allocation as following-

Sl. No.	Lesson	Study Time	Marks
1.	Revision	10 hours	10
2.	Word Processing: Specialties	15 hours	15
3.	Spread sheet	15 hours	15
4.	Presentation	15 hours	15
5.	Internet & its Benefits	15 Hours	15
6.	Computer Security	15 hours	15
7.	E-Mail	15 hours	15
	Total	100 hours	100

6. Course Description

Lesson-1: Revision

What is computer & what are its usages, different parts of computer and their functioning, what are operating systems & their functioning, making documents, letters, applications with aid of a computer and sending them.

Lesson-2: Word Processing: Specialties

What is word processor and what are its usages, making a table using word processor and filling the data in the table, changing the typing fonts& making documents in Hindi and other languages, sending the document to many people personally.

Lesson-3: Spread Sheet

What is Spread Sheet and how it is used? Making spread sheet, different parts of spread sheet, mathematical formulae and equations available on spread sheet and using them, filling data in spread sheet and making corrections.

Lesson-4: Presentation

What is presentation? For what is it used and how? Ways of making presentations, presenting after making a presentation, inserting picture, graph and text in the presentation, formatting the presentation, adding, correcting, changing material in presentation, sequencing the presentation properly.

Lesson-5: Internet and Its Benefits

What is internet? History and benefits of internet, practical usages of internet, connecting with the internet, world wide web (www), website & webpage, opening the websites, collecting information from websites, reading online newspapers

Lesson-6: Computer Security

Need for Computer and Internet security, available ways of protection, rules for making and keeping password securely, what is computer virus? Dangers of virus and ways of protection from virus

Lesson-7: E-Mail

What is E-mail? Address of email or E-mail address, functioning of E-mail, difference between general post/mail and E-mail, benefits of E-mail, E-mail account, address book, and sending E-mail message, file attachment.

7. Scheme of Study

This course is essentially for self-study. The course material has been prepared keeping in mind the social, psychological & intellectual conditions of the intended learners. As the course is designed for self-study therefore at the end of each lesson, questions related to the lesson are given, so that learners are able to develop concepts as well as learn to express them well through writing.

Learners also have the option of attending contact classes at their AIs, learners will be able to clarify any subject related doubts in these classes as well as discuss them with

their peer group. Learners can also clarify their subject related problems at literacy centre and adult education centre.

8. Scheme of Evaluation

8.1 Self-Assessment

Learner can keep doing their evaluation throughout the course. For this purpose a scrutiny/ question paper is provided after every four lessons, which contains questions related to those four lessons. Learners can answer these questions and then evaluate their answers by looking at the correct answers provided at the end. This is the self-evaluation method adopted for this course.

8.2 External Assessment

After completing the course the learner will appear in external evaluation. The method for this evaluation is written examination, which will consist of 100 marks. The duration of this exam will be three hours and question paper will comprise questions based on lessons and concepts in them, as well as on general understanding. There will be objective questions, very short answer questions, short answer questions and long answer questions.