SYLLABUS FOR THE BATCH FROM YEAR 2025 TO 2026

FOR

Certificate course in Sustainable Agriculture

(Credit Based Evaluation and Grading System)

SEMESTER-I
EXAMINATIONS: 2025-2026

Program Outcomes:

- **Fundamental Knowledge of Agriculture** – Students will gain understanding concepts of sustainable Agriculture, enabling them to use various technologies effectively.
- **Enhanced Technical Skills** – The program focuses on improving students' abilities to understand the application of technologies for sustainability of agriculture for future need.
- **Practical Experience** – Through hands-on assignments and projects, students will learn problem-solving skills by working on insitu and offsitu technologies for crop residue management.
- **Career Readiness & Employability** – The program prepares students for sustainable development in Agri-related fields by equipping them with technical skills and knowledge.

Name of the Department: Agriculture

In Collaboration with

Directorate of Open & Distance Learning and Online Studies

GURU NANAK DEV UNIVERSITY AMRITSAR

Certificate course in Sustainable Agriculture Offered by Department of Agriculture in collaboration with Directorate of Open & Distance Learning and Online Studies, Guru Nanak Dev University, Amritsar

Eligibility:

- +2 in any stream or Equivalent Examination.
- Any student pursuing Bachelor Degree, Master Degree, M.Phil., Ph.D. from GNDU campus, affiliated or constituent colleges.

SEMESTER-I

Paper Code	Subject	Marks			Credits
		Internal Assessment	End Term	Total	
ODSA111T	Crop Residue Management	30	70	100	4
ODSA112T	Integrated Farming system for sustainable Agriculture	30	70	100	4
ODSA113T	Organic Agriculture	30	70	100	4
ODSA114T	Conservational Agriculture	30	70	100	4
Total Marks & Credits		**120**	**280**	**400**	**16**

Certificate course in Sustainable Agriculture Offered by Department of Agriculture in collaboration with Directorate of Open & Distance Learning and Online Studies, Guru Nanak Dev University, Amritsar

Subject Name: Crop Residue Management

Subject Code: ODSA111T

(Semester–I)

Time: 03Hours **Max.Marks:100Marks**

Internal Assessment: 30 Marks

End Term: 70Marks

Instructions for the Paper-Setter/examiner:

1. Question paper shall consist of **Four sections**.
2. Paper setter shall set **Eight questions** in all by selecting **Two questions** of equal marks from each section. However, a question may have sub-parts (not exceeding four sub- parts) and appropriate allocation of marks should be done for each sub-part.
3. Candidates shall attempt **Five questions** in all, by at least selecting **One question** from each section and the **5th question** may be attempted from any of the **Four sections**.
4. The question paper should be strictly according to the instructions mentioned above. In no case a question should be asked outside the syllabus.

Section – A

Crop residue management:

- History
- Causes
- Current scenario
- Concept
- Significance and Challenges

Section –B

Management of crop residues

- On-site
- off-site
- soil health

Section –C

Recent technologies for conservation agriculture.

- Modern concept of Tillage
- Methods and time of sowing
- Water management

Section - D

Beneficial effects of crop residue on

- soil health,
- crop yields,
- social
- environmental concerns.

Subject Name: Integrated Farming system for sustainable Agriculture

Subject Code: ODSA112T

(Semester–I)

Time: 03Hours **Max.Marks:100Marks**

Internal Assessment: 30 Marks

End Term: 70Marks

Instructions for the Paper-Setter/examiner:

1. Question paper shall consist of **Four sections**.
2. Paper setter shall set **Eight questions** in all by selecting **Two questions** of equal marks from each section. However, a question may have sub-parts (not exceeding four sub- parts) and appropriate allocation of marks should be done for each sub-part.
3. Candidates shall attempt **Five questions** in all, by at least selecting **One question** from each section and the **5th question** may be attempted from any of the **Four sections**.
4. The question paper should be strictly according to the instructions mentioned above. In no case a question should be asked outside the syllabus.

Section – A

Integrated Farming System-

- Concept
- Objectives
- Classification of farming systems.
- Components of Farming system.

Section –B

Sustainable agriculture-

- Introduction,
- definition,
- goal.
- Concept of Sustainability in farming systems.

Section –C

In intensive cropping system for sustainable agriculture

- Role of organic matter
- Fertilizer use efficiency
- Concept of fertilizer use.
- Maintenance of soil fertility

Section - D

Natural resources –

- identification and
- management,
- factors affecting conservation of natural resources

Subject Name: Organic Agriculture

Subject Code: ODSA113T

(Semester–I)

Time: 03Hours **Max.Marks:100Marks**

Internal Assessment: 30 Marks

End Term: 70Marks

InstructionsforthePaper-Setter/examiner:

1. Questionpapershallconsistof **Four sections**.
2. Paper setter shall set **Eight questions** in all by selecting **Two questions** of equal marks from each section. However, a question may have sub-parts (not exceeding four sub- parts) and appropriate allocation of marks should be done for each sub-part.
3. Candidates shall attempt **Five questions** in all, by at least selecting **One question** from each section and the **5th question** may be attempted from any of the **Four sections**.
4. The question paper should be strictly according to the instructions mentioned above. In no case a question should be asked outside the syllabus

Section – A

Organic farming –

- Concept and definition,
- Its relevance to India and global agriculture
- Future prospects

Section –B

Soil fertility-

- Nutrient recycling,
- Organic residues,
- Organic manures,
- Composting,
- Soil biota and decomposition of organic residues.

Section –C

- Earthworms and vermicompost,
- Green manures and biofertilizers.
- Maintenance of soil productivity: Farming systems,
- Crop rotations, intercropping

Section - D

- Organic standards,
- Certification,
- Labeling and accreditation procedures.

Subject Name: Conservational Agriculture

Subject Code: ODSA114T

(Semester–I)

Time: 03Hours **Max.Marks:100Marks**

Internal Assessment: 30 Marks

End Term: 70Marks

Instructions for the Paper-Setter/examiner:

1. Question paper shall consist of **Four sections**.
2. Paper setter shall set **Eight questions** in all by selecting **Two questions** of equal marks from each section. However, a question may have sub-parts (not exceeding four sub- parts) and appropriate allocation of marks should be done for each sub-part.
3. Candidates shall attempt **Five questions** in all, by at least selecting **One question** from each section and the **5th question** may be attempted from any of the **Four sections**.
4. The question paper should be strictly according to the instructions mentioned above. In no case a question should be asked outside the syllabus.

Section – A

Conservation agriculture

- definition,
- status and prospects.
- Resource conservation technology including modern concept of tillage.

Section –B

Conservation agriculture

- Its role towards natural resources management and sustainability concerns.

Section –C

Concept of conservation agriculture and their fulfillment using tillage

- and crop residue management,
- efficient cropping systems,
- water and nutrients management

Section - D

- Relevance of conservation agriculture under changing climatic conditions.
- Impact of conservation agriculture on soil health and crop productivity.