

नेपाल सरकार
शिक्षक सेवा आयोग

माध्यमिक तह (कक्षा ९-१२) को शिक्षक अध्यापन अनुमतिपत्रको लिखित परीक्षा पाठ्यक्रम, २०७५

पहिलो पत्र : बाली विज्ञान (Plant Science)

- ६५ अङ्क

Introduction

This course consist of basic knowledge and skills related to plant sciences focusing on various agricultural techniques in Soil Science, Horticulture, Agronomy, Industrial Entomology, Aquaculture, Farm Mmanagement, and Extension .

Objectives

- Acquire basic knowledge and skills related to plant science.
- Identify different technological problems in production with their solutions.
- Introduce basic knowledge about the management practices of crops, and marketing system of the products as well as agricultural extension in Nepal.

Part : 1

40 Marks

1. Agronomy

- 1.1. Introduction to Agronomy.
- 1.2. Climate of Nepal.
- 1.3. Cropping system in Nepal
- 1.4. Field Preparation and tillage .
- 1.5. Farm mechanization and farm power.
- 1.6. Irrigation and drainage system.
- 1.7. Seed technology of agronomical crop.
- 1.8. Common pests and diseases of Agronomical crops
- 1.9. Post-harvest management of agronomical crop.
- 1.10. Production Technology of agronomical crop (Cereal, Legumes, oil seed and Industrial crops).

2. Soil Science

- 2.1 Introduction to soil types
- 2.2 Geology and soil formation.
- 2.3 Soil properties in relation to crop production
- 2.4 Plant Nutrition and soil fertility.
- 2.5 Soil and plant analysis.
- 2.6 Organic matter, manures and chemical fertilizers
- 2.7 Soil fertility and productivity and their sustainable management
- 2.8 Soil erosion, conservation and watershed management

3. Aquaculture and Fisheries

- 3.1. Introduction of Aquaculture
- 3.2. Management of fish pond
- 3.3. Farming of common exotic and indigenous fish species.
- 3.4. Fish breeding Techniques
- 3.5. Fish disease and parasite management

4. Horticulture

- 4.1. Introduction to horticulture.
- 4.2. Nursery and orchard management.

- 4.3. Plant growth and regulator.
- 4.4. Training & Pruning.
- 4.5. Plant propagation in fruit crops
- 4.6. Kitchen garden, off season vegetable farming and organic farming.
- 4.7. Scope and importance of vegetables seed and seed technology
- 4.8. Cultivation practices of common horticultural crop (Fruits, Vegetables, and Flowers)
- 4.9. Major insect pest and disease of horticultural crop (Fruits, Vegetables, And Flowers)
- 4.10. Post-Harvest Technology of horticultural crops..

5. Extension

- 5.1. Introduction to Agriculture Extension in Nepal.
- 5.2. Common practices in agriculture extension in Nepal.
- 5.3. Group formation and group dynamics in farming communities
- 5.4. Leadership development in extension
- 5.5. Adoption and diffusion process in extension: Fto F and FFS, LF approaches.
- 5.6. Pprogram planning, monitoring and evaluation in extension
- 5.7. Gender and social mobilization in farming communities.

6. Farm Management

- 6.1. Introduction to farm management, its scope and importance
- 6.2. Basic economic concept in farm planning
- 6.3. Cost & benefit analysis
- 6.4. Planning of farm system
- 6.5. Budgeting and record keeping
- 6.6. Role of Agricultural Marketing and its oppurtunities and limitations in Nepal.
- 6.7. Type of market and marketing systems
- 6.8. Concept of cooperative
- 6.9. International trade and role of WTO in Nepalese economy

7. Industrial Entomology and Mushroom

- 7.1. Introduction to the course
- 7.2. Cultivation practices of common edible mushroom.
- 7.3. Insect pest and disease of cultivated mushroom.
- 7.4. Introduction tof bee keeping.
- 7.5. Introduction to sericulture.

Part: 2

25 Marks

8. Curriculum Related Knowledge

- 8.1 Space of plant science in secondary school curriculum.
- 8.2 Breadth/Depth of the content
- 8.3 Knowledge of competences and learning outcomes
- 8.4 Resource materials of plant science in secondary level.

9. Classroom Teaching Skills

- 9.1 Class room management skills
- 9.2 Effective Presentation Skills/Exposition
- 9.3 Problem Based Learning Strategies
- 9.4 Small Group/Whole Class Discussion
- 9.5 ‘Observation’ as an instructional strategy

10. Use of 'Projects' and 'Field Works' in Instruction

- 10.1 Project Planning
- 10.2 Implementing and Communicating
- 10.3 Learning by doing practices
- 10.4 Reporting/Presentation
- 10.5 Exhibition

11. Assessment in teaching

- 11.1 Knowledge of assessment plan and specification grid in school curriculum
- 11.2 Developing test and appropriate tools for student assessment.
- 11.3 Authentic assessment to measure performance. (Use of rubrics)

12 Use of ICT

- 12.1. ICT as content enhancement (Use of various ICT tools to explore different topics of plant science and terminologies)
- 12.2. ICT as delivery tool (Mobile, Multimedia software, online materials, games in classroom for specific contents)

Marks distribution and Grid

Units	Objective Question			Subjective Question			Total Q	Total Marks
	No.of Q.	Marks	Total	No.of Q.	Marks	Total		
1	8	1	8	-	-	-	8	8
2	6	1	6	-	-	-	6	6
3	5	1	5	-	-	-	5	5
4	10	1	10	-	-	-	10	10
5	4	1	4	-	-	-	4	4
6	3	1	3	-	-	-	3	3
7	4	1	4	-	-	-	4	4
8	-	-	-	5	1	5	1	5
9	-	-	-	5	1	5	1	5
10	-	-	-	5	1	5	1	5
11	-	-	-	5	1	5	1	5
12	-	-	-	5	1	5	1	5
Total	40	1	40	5	5	25	45	65

द्रष्टव्य :

१. प्रश्न पत्र तयार गर्दा संज्ञानात्मक तहका सबैजसो क्षेत्र समेटिने छन् ।
२. विषयगत प्रश्नहरूमाफत सिर्जनशीलता र शिक्षणसँग सम्बन्धित व्यावहारिक पक्षहरू मापन गर्ने उद्देश्य राखिने छ ।
३. कण्ठस्थ गरी दिइएका जवाफभन्दा शिक्षण सिकाइसँग सम्बन्धित व्यावहारिक पक्षहरूको विश्लेषण/विवेचना तथा समस्याको समाधान गर्दै दिइएका मौलिक तथा सिर्जनात्मक उत्तरलाई प्रोत्साहित गरिने छ ।
४. खण्ड (ख) अन्तर्गतका शिक्षणकलासँग सम्बन्धित प्रश्नहरू खण्ड (क) मा दिइएका विषयहरूको व्यवहारिक पक्षसँग जोडेर तयार गरिने छन् ।
५. लामो उत्तर आउने प्रश्नहरू शिक्षणमा सूचना प्रविधिको प्रयोगलाई समेत ध्यान दिइने छ ।