

लोक सेवा आयोग

कृषि सेवा, बाली संरक्षण, बाली विकास र माटो विज्ञान समूह, राजपत्राङ्कित तृतीय श्रेणी
(प्राविधिक) पदको प्रतियोगितात्मक लिखित परीक्षा

मिति: २०७९/११/०७

घण्टा

पत्र: द्वितीय

पूर्णाङ्क: १००

इसको उत्तर Section अनुसार छुट्टै उत्तर पुस्तिकामा लेख्नु पर्नेछ ।

Section-A

"The adaptation of research generated technologies in agricultural sector is affected by many factors". Briefly justify.

What is Value Chain (VC)? What steps do you follow while designing a VC program for an agriculture commodity? Explain clearly.

Differentiate between sampling and non-sampling errors. What are the measures to minimize such errors? Mention.

Section-B

Briefly explain the major Resource Conservation Technologies (RCTs) used in crop production in Nepal.

Describe the causes of soil fertility degradation in Nepal and suggest remedies to correct it.

State seed testing principles. Again, elaborate the seed certification procedures in Nepal.

Section-C

Describe in brief the importance of rootstock management in citrus for area expansion.

What cultural operation that needs to be performed in maintaining the citrus orchards in the months of Poush to Chaitra? Describe.

What are the major causes of post-harvest losses in fruits and vegetable in Nepal? Provide your suggestions to address such causes for loss.

Section-D

Briefly describe the cultivation techniques of *Pleurotus* Spp. (Oyster mushroom).

How to conduct survey and surveillance for PRA, pest forecasting and declaration of pest free areas?

Describe about the life cycle and management practices of Fall Armyworm (*Spodoptera frugiperda*) in maize.

लोक सेवा आयोग

नेपाल कृषि सेवा, एगृ एक्सटेन्सन, एगृ इको एण्ड मार्केटिङ, हर्टिकल्चर, एग्रोनोमी, प्लान्ट प्रोटेक्सन, र स्वायल साइन्स समूह, राजपत्राङ्कित तृतीय श्रेणी (प्राविधिक) पदको प्रतियोगितात्मक लिखित परीक्षा

मिति: २०७८/०६/२२

समय: ३ घण्टा

पत्र: द्वितीय

पूर्णाङ्क : १००

निम्न प्रश्नहरूको उत्तर Section अनुसार छुट्टाछुट्टै उत्तर पुस्तिकामा लेख्नु पर्नेछ ।

Section-A

1. What is participatory planning in agriculture? Briefly describe the steps and implementation of local development projects for agriculture.
2. Describe the agriculture research, education and extension service in Nepal with examples and give suggestions for improvement.
3. Chemical fertilizers are the key agricultural inputs. Beside the government subsidized chemical fertilizers, are there any provision for non-subsidized chemical fertilizer marketing in Nepal? Is the subsidy system in chemical fertilizers the right approach? Should it be removed? Give your opinion.

Section-B

4. What is the importance of quality seed? Give brief description on practices of seed production by Nepalese farmers.
5. What do you mean by Integrated Plant Nutrient System (IPNS)? Explain the importance of IPNS considering its major components for sustainable soil management in Nepal.
6. Why are soils important? Soils are the basis of life for a large number of plants and animals. Justify it with examples.

Section-C

7. Describe the onion seed production practices from bulb selection to post harvest operation.
8. a. Describe briefly about the nursery preparation and management procedure for vegetable crops during rainy season.
b. Write a curing procedure of cardamom prevailing in Nepal.
9. What improvements to crop varieties can be made to ensure that emissions of greenhouse gases from agriculture and horticulture are reduced? Explain with examples.

Section-D

10. In recent days incidence of Fall Armyworm (FAW) is increasing in Nepal. Suggest effective and applicable prevention/ control measure of Fall Armyworm.
11. What is the importance of plant quarantine in minimizing pest problems to crops in the country? Elaborate its role in agriculture trade facilitation and in fulfilling regional and global commitments.
12. What are the causes and symptoms of citrus greening disease? Discuss about the economic loss occurred in Nepal due to this disease.

लोक सेवा आयोग

नेपाल कृषि सेवा, बाली संरक्षण समूह,

राजपत्राङ्कित तृतीय श्रेणी प्राविधिक पदको प्रतियोगितात्मक लिखित परीक्षा

मिति: २०७६/१२/०५

समय: ३ घण्टा

पत्र: द्वितीय

पूर्णाङ्क : १००

विषय: Technical Subject

निम्न प्रश्नहरूको उत्तर Section अनुसार छुट्टाछुट्टै उत्तर पुस्तिकामा लेख्नु पर्नेछ ।

Section-A

1. What do you understand by law of marginal diminishing rate of return? Explain why it happens in agriculture?
2. Based on the technology adaptation category of the farmers, why legguards are said as barriers in technology dissemination and adaptation? Explain it.
3. The price gap of vegetable between producer and the consumer is high and what activities are implemented from government to reduce the gap? How we can improve within its value chain?

Section-B

4. How the crop seeds are certified in Nepal? Explain its process in short.
5. Describe the constraints in increasing the productivity of rice in Nepal.
6. Enlist major causes of declining soil fertility in Terai region of Nepal and suggest correction measures.

Section-C

7. List 5 widely cultivated varieties of tomato. Describe tomato cultivation practice in plastic tunnel briefly.
8. Mention suitable vegetable seed production zones in Nepal. Why Rukum area is considered as an appropriate for radish seed production?
9. What mechanism can increase the seed replacement rate and independency of seed of vegetable crops?

Section-D

10. Mention the name of banned pesticide in Nepal? And list the adverse effect of hazardous pesticides with example.
11. Describe cultivation techniques of *Agaricus* spp. in Nepal.
12. Mention major ten insects of vegetables with scientific name having economic losses and describe control measures of potato tuber moth without chemical methods.

प्रदेश लोकसेवा आयोग, कर्णाली प्रदेश

कृषि सेवा, एगू इको एण्ड मार्केटिङ/ बागवानी/कृषि प्रसार/बाली विकास/ बाली संरक्षण र माटो विज्ञान समुह, अधिकृतस्तर
सातौं तह, कृषि अर्थ विज्ञ/बागवानी विकास अधिकृत/कृषि प्रसार अधिकृत/बाली विकास अधिकृत/बाली संरक्षण
अधिकृत/ माटो विज्ञ र कृषि अधिकृत पदको खुला

प्रतियोगितात्मक लिखित परीक्षा

परीक्षा मिति: २०८१/०५/०८

पत्र: द्वितीय

चरण : प्रथम

विषय: प्राविधिक विषय

पूर्णाङ्क : १००

समय : ३ घण्टा

सबै प्रश्नहरू अनिवार्य छन् को उत्तर (Section) प्रत्येक खण्ड। छुट्टा छुट्टै उत्तर पुस्तिकामा लेख्नुपर्नेछ, अन्यथा उत्तर पुस्तिका रद्द हुनेछ।

Section-A

1. What are the major issues associated with smooth collaboration and coordination among three tiers of government for agriculture development? What would you suggest for enhanced coordination? Justify your answer including institutional and policy reform.
2. What are major risks for farmers associated with agricultural commercialization in Karnali? How can farmer's risks be mitigated? Justify your answer with appropriate example.
3. Write the name of the major agriculture extension approached adopted in Nepal before federalization and also briefly describe how agricultural extension is working in these days with your suggestion to improve this system in future.
4. What do you mean by value chain? Sketch a typical value chain map and discuss on whether the value chain approach is applicable in agricultural projects/programs in Nepal.

Section-B

5. Write short note on:
 - a. Organic and biofertilizer
 - b. Mobilization and Immobilization
 - c. Humus is a pool of plant nutrients
 - d. Organic Carbon Sequestration
 - e. Soil fertility and productivity
6. Classify the agronomical crops (cereals, pulses and oil seeds) according to mode of pollination.

What are the objectives of Integrated Plant Nutrient System? Explain how IPNS could address the soil fertility problems in Nepal?

Write in brief about crop variety development, release and registration procedure in Nepal. Give in details about hybrid seed production techniques in maize and rice.

Section-C

Write a short note on:

- a. Roof top farming
- b. Asexual method of propagation in horticulture crops
1. Outline the major technical factors and managerial aspects of nursery for production of quality saplings in fruit crop?
1. Identify opportunities and problems of mandarin farming in Dailekh district of Nepal. How can you manage citrus decline in the district?

Section-D

2. Differentiate the internal and external seed born disease and describe the disease cycle and effectively control measure of loose smut disease of wheat.
3. Name one important field identification mark on each of the following rice insect pests.
 - a. *Chilo partellus*
 - b. *Chilo suppressalis*
 - c. *Sesamia inferents*
 - d. *Nephotettix nigropictus*
 - e. *Spodoptera frugiperda*
14. List of the various insects and disease of tomato and describe the damage symptoms, life cycle and control measure of South American Leaf Minor insect in tomato.

प्रदेश लोक सेवा आयोग

बागमती प्रदेश

कृषि सेवा, विभिन्न समूह, सातौं तह, अधिकृत सातौं वा सो सरह पदको

अन्तर तह तथा खुला प्रतियोगितात्मक लिखित परीक्षा - २०७९

परीक्षा मिति: २०७९/१०/२८

पत्र: द्वितीय

पूर्णाङ्क : १००

विषय: सेवा सम्बन्धी

समय: ३ घण्टा

निम्न प्रश्नहरूको उत्तर Section अनुसार छुट्टैछुट्टै उत्तर पुस्तिकामा लेख्नुपर्नेछ।

Section-A

1. Describe the role and importance of extension worker in the field of agriculture extension program in Nepal.
2. What do you mean by monitoring and evaluation of agricultural projects? What are the indicators of program evaluation, describe them briefly.
3. When did Nepal become member of WTO? What are its benefits for Nepal?

Section-B

4. Write short notes on:
 - a. Plant nutrition and their functions in plant growth.
 - b. Importance and types of organic fertilizers
5. Explain certified seed production practices of Maize in hills of Nepal.
6. Enlist the five recommended varieties each of Paddy, Maize and Wheat in Terai region of Nepal.

Section-C

7. Write about post-harvest loss in vegetables and fruits with recommendation for its reduction.
8. Describe the cultivation practices of Potato.
9. What do you mean by organic vegetable farming? Explain their role in sustainable agriculture development.

Section-D

10. What do you mean by IPM? Describe briefly the principles of IPM.
11. How does Brown Plant Hopper (*Nilaparvata lugens*) damage the rice plants? Explain the control measures of BPH in rice.
12. Describe the good management practice to be followed in order to increase the productivity of the citrus orchards.

प्रदेश लोक सेवा आयोग

बागमती प्रदेश

कृषि सेवा, छैटौं तह, अधिकृत छैटौं (प्रा.) पदको खुला प्रतियोगितात्मक लिखित परीक्षा-२०७९

परीक्षा मिति: २०७९/०२/२९

द्वितीय

पूर्णाङ्क : १००

विषय: सेवा सम्बन्धी

समय: ३ घण्टा

न प्रश्नहरूको उत्तर Section अनुसार छुट्टै उत्तर पुस्तिकामा लेख्नुपर्नेछ ।

Section-A

Describe the role of Extension in Nepalese Agriculture development, compare Formal and Non-formal education and mention the strength and weakness of training and visit extension system in Nepal. Why is this system ineffective in changing context in Nepal?

विद्युव्यापार सङ्गठनमा नेपालको तर्फबाट प्रस्तुत भएका कृषि सम्बन्धी सम्झौताका बुँदाहरू उल्लेख गर्दै त्यसबाट कृषि विकासमा पर्ने नकारात्मक असर बारे लेख्नुहोस् ।

- Project Cycle को बारेमा उल्लेख गर्दै Monitoring and Evaluation बीच फरक देखाउनुहोस् ।
- Agriculture Census को बारेमा उल्लेख गर्दै Correlation Analysis को प्रयोग कृषि क्षेत्रमा कसरी गरिन्छ ?

Section-B

What are essential plant nutrients? Describe the role of major nutrients and deficiencies symptoms.

Soil Survey को महत्त्व दर्साउनुहोस् । Hydrological Cycle को परिभाषा दिँदै SALT बारे सविस्तार व्याख्या गर्नुहोस् ।

RCT को महत्त्व दर्साउँदै SRR भन्नाले के बुझिन्छ ? उल्लेख गर्नुहोस् । धान खेतीका लागि उपयुक्त माटो र हावापानी बारेमा उल्लेख गर्दै बीउ उत्पादनमा ISOLATION DISTANCE को महत्त्व बारे प्रकाश पार्नुहोस् ।

Section-C

Differentiate open pollinated variety and hybrid variety and mention the steps of hybrid seed production in Tomato.

अर्गानिक तरकारी खेती भन्नाले के बुझिन्छ ? संरक्षित संरचना भित्र व्यावसायिक रूपमा अपनाइने प्रविधि, आइपर्ने समस्याहरू र समाधानका उपायहरू बारे चर्चा गर्नुहोस् ।

Section-D

Write short notes on:

- Rodents and their management
- White stem borer of coffee
- Biology of Silkworm and Honey bee

How club root diseases of crucifers do disseminate? Describe integrated approach for managing this disease.

प्रदेश लोकसेवा आयोग
बागमती प्रदेश
कृषि सेवा, छैटौतह, अधिकृत छैटौ (प्रा.) पदको खुला
प्रतियोगितात्मक लिखित परीक्षा-२०७९
परीक्षामिति: २०७९/०२/१४

द्वितीय

पूर्णाङ्क: १००

प्र: Technical Subject

समय: ३ घण्टा

प्रश्नहरूको उत्तर Section अनुसार छुट्टै उत्तर पुस्तिकामा लेख्नुपर्ने छ। अन्यथा उत्तरपुस्तिका रद्द हुनेछ।

Section-A

Give the reason for considering "Group approach of Extension" as most efficient and effective one among various extension system being adopted in Nepal.

कृषि अर्थशास्त्रको परिभाषा गर्दै कृषि बजारका प्रकारहरू उल्लेख गर्नुहोस्। उत्पादन लागत प्रभाव पार्ने पक्षहरू बारे रिपोर्ट गर्दै Farm Management को महत्व दर्शाउनुहोस्। नेपालको कृषि बजारमा देखिएका समस्या र तिनीहरूको समाधानका उपायहरू उल्लेख गर्नुहोस्।

अनुगमन र मूल्याङ्कन बीच रहेको अन्तरसम्बन्ध र कृषि विकास परियोजनाहरूको अनुगमन मूल्याङ्कनको प्रक्रियाबारे लेख्नुहोस्।

Section-B

माटोको परिभाषा गर्दै Good Soil Health का लागि Microorganism को भूमिका प्रष्ट पार्नुहोस्।

नेपालमा दिन प्रतिदिन माटो उर्वरा शक्ति ह्रास हुँदै जानुका कारणहरू उल्लेख गर्दै IPN ले दिगो माटो व्यवस्थापन गर्न कसरी सहयोग गर्छ, उल्लेख गर्नुहोस्।

Write short notes on:

- Hydrological Cycle
- Soil water management and water stress
- SALT

What is the importance of pollination and classify the crops based on mode of pollination?

Section-C

नेपालमा व्यवसायिक गोलभेंडा खेती सम्बन्धी निम्न विषयमा लेख्नुहोस्।

- असल जातको बिउको व्यवस्थापन
- हावापानी र माटो
- जातहरू, नर्सरी व्यवस्थापन
- मलखाद र रोग/कीरको व्यवस्थापन

Root Stock को परिभाषा र महत्व दर्शाउँदै Precision and Protected Horticultural Technology को महत्व उल्लेख गर्नुहोस्। Fruit को परिभाषा लेख्दै Drop Seed Germination हुनुका कारणहरू उल्लेख गर्नुहोस्।

Section-D

What is LD₅₀? Xlassify the pesticide based on WHO classification.

Disease Triangle बारे उल्लेख गर्दै Rice Blast को लक्षण र उपचार विधि बारे ब्याख्या गर्नुहोस्।

प्रदेश लोक सेवा आयोग

गण्डकी प्रदेश

प्रदेश तथा स्थानीय कृषि सेवा, विभिन्न समूह अन्तर्गत, अधिकृतस्तर सार्थक तहका

(अन्तरतह, दुस्रा तथा समावेशी) प्रतियोगितात्मक लिखित परीक्षा

परीक्षा मिति: २०८०/०९/०७

समय: ३ घण्टा

पत्र: द्वितीय

पुर्णङ्कः १००

दिन प्रश्नको उत्तर Section अनुसार हुने हुने उत्तर पुस्तिका लेख्नुपर्ने छ। अन्यथा उत्तरपुस्तिका रद्द हुनेछ।

Section-A

1. Discuss the role of digital technology in efficient service delivery in agriculture.
2. What are the key issues and constraints in agriculture marketing and value chain development in Nepal? Please provide your options and solutions for improving agriculture value chains in Nepal.
3. How do you justify the importance of extension education in Nepalese agriculture development?

Section-B

4. What are the principles of seed production? Mention prospects and constraints of formal seed system in Nepal.
5. Describe the role of soil microorganism in the process of biological nitrogen fixation, nitrification and de-nitrification.
6. Some indigenous crops in Nepal are considered very important from human diet and food and nutrition security point of view, but not utilized properly. Describe some of those underutilized crops and their importance and uses. Also suggest the appropriate pathway to scale up their production and utilization in Nepal.

Section-C

7. Define and describe in brief the concept of high density planting of fruit trees and suggest techniques with some example in Gandaki Province.
8. Horticultural commodities are considered highly perishable and the extent of their post-harvest losses is comparatively very high. Explain its major causes and suggest some methods and techniques of prolonging their shelf-lives and minimizing post-harvest losses with appropriate examples.
9. In recent years, off-season vegetable production is getting popularity in many parts of Nepal. How will you describe the term "off-season vegetable production" and its importance? Please explain some of the techniques of producing off-season vegetables with appropriate examples in Nepal's context.

Section-D

10. Discuss the importance of bio-pesticides and bio-fungicides in pest and disease control? Elaborate how they are better than chemical pesticides.
11. Citrus decline is one of the major problems in Gandaki province. What are the causes of citrus decline? Provide best way of combating citrus decline. Describe the life cycle of Citrus Psylla and effective control measures.
12. How do you explain about the importance and challenges of plant quarantine in Nepalese agriculture?

लोक सेवा आयोग
नेपाल कृषि सेवा, एगु इको एण्ड मार्केटिङ्ग समूह, राजपत्राङ्कित तृतीय श्रेणी (प्राविधिक)
पदको प्रतियोगितात्मक लिखित परीक्षा
२०७३/११/१०

समय: ३ घण्टा

पूर्णाङ्क: १००

Paper : Second

विषय: एगु, इको एण्ड मार्केटिङ्ग सम्बन्धी

निम्न प्रश्नहरूको उत्तर Section अनुसार छुट्टै उत्तरपुस्तिकामा लेख्नुपर्नेछ, अन्यथा उत्तरपुस्तिका रद्द हुनेछ।

Section – A

1. "Problems of poverty and unemployment in rural areas should be addressed multi – pronged approach". Justify this statement. (10)
2. Describe the salient features of agricultural development strategy (ADS) in Nepal ? How do you see its weakness and strengths ? (10)
3. What is the reason for carrying out feasibility study of agricultural projects ? Briefly describe the economics decision criteria to select the projects. (10)

Section – B

4. Write short notes on: (2 × 5 = 10)
 - a) Law of diminishing return
 - b) Production possibilities curve
5. What do you understand by production functions ? How can one decides the optimum level of production ? (10)

Section – C

6. What do you understand by farm management ? Describe its role managing agricultural farms towards their commercialization in Nepal ? (5 + 5 = 10)
7. Do you think that agricultural markets in Nepal are efficient? If yes, why? If no, what measures do you suggest to improve the efficiency of agricultural market ? (10)
8. Describe the role of agricultural finance for agricultural commercialization in Nepal (10)

Section – D

9. What do you mean by hypothesis testing ? Differentiate between Null and Alternative hypothesis ? (10)
10. What do you understand by Agricultural Census ? What are the key messages given by the recent agricultural census of Nepal ? (10)

लोक सेवा आयोग

नेपाल कृषि सेवा, वाली संरक्षण समूह, राजपत्राङ्कित तृतीय श्रेणी (प्राविधिक)

पदको प्रतियोगितात्मक लिखित परीक्षा

२०७६/१२/५

पूर्णाङ्क: १००

Paper : Second

Subject: Technical Subject

Section - A

1. What do you understand by law of marginal diminishing rate of return ? Explain why it happens in agriculture ? (5)
2. Based on the technology adoption category of the farmers, why legguards are said as barriers in technology dissemination and adoption? Explain it. (10)
3. The price gap of vegetable between producer and the consumer is high and what activities are implemented from the government to reduce the gap ? How we can improve within its value chain ? (5 + 5 = 10)

Section - B

- How the crop seeds are certified in Nepal ? Explain its process in short (5)
- Describe the constraints in increasing the productivity of rice in Nepal (10)
- Enlist major causes of declining soil fertility in Terai region of Nepal and suggest correction measures. (10)

Section - C

- List 5 widely cultivated varieties of tomato. Describe tomato cultivation practice in plastic tunnel briefly. (5)
- Mention suitable vegetable seed production zones in Nepal why Rukum area is considered as an appropriate for radish seed production? (10)
- What mechanism can increase the seed replacement rate and independency of seed of vegetable crops ? (5 + 5 = 10)

Section - D

0. Mention the name of banded pesticide in Nepal. And list the adverse effect of hazardous pesticides with examples. (5)
1. Describe cultivation techniques of *Agaricus* spp in Nepal (10)
2. Mention major ten insects of vegetables with scientific name having economic losses and describe control measure of potato tuber moth without chemical methods. (10)

लोक सेवा आयोग
राजपत्रांकित तृतीय श्रेणी, नेपाल कृषि सेवा, एगु.इको एण्ड मार्केटिङ्ग समूहको
प्रतियोगितात्मक लिखित परीक्षा
२०७०/११/९.

समय: ३ घण्टा
पत्र: द्वितीय।

पूर्णाङ्क: १००
विषय: एगु. इको. एण्ड मार्केटिङ्ग सम्बन्धी।

Section - A

1. नेपालको कृषि क्षेत्रमा विद्यमान प्रमुख समस्याहरु के के हुन् ? यी समस्याको समाधानबाट गरिवी न्यूनीकरणमा कसरी मद्दत पुग्न सक्दछ ? आफ्नो प्रस्तुत गर्नुहोस्। (10)
2. Fertilizer crisis is erupting almost every year. Suggest possible solution measures on it. (10)
3. Prepare a Logical Framework for a hypothetical project " Empowering women farmers in Nepal." (10)

Section - B

4. Explain the behavior of oligopolistic market for price determination. (10)
5. Express the meaning and use of the following: (5 + 5 = 10)
 - a) Shadow price
 - b) Opportunity cost in Agriculture

Section - C

6. फार्म व्यवस्थापन भन्नाले के बुझिन्छ ? फार्म व्यवस्थापनको महत्त्वको व्याख्या गर्नुहोस्। (10)
7. कृषिको व्यवसायिकरण गर्न चाल्नुपर्ने कदमहरुको व्याख्या गर्नुहोस्। (10)
8. नेपाल राष्ट्र बैंकको निर्देशानुसार कृषि क्षेत्रमा बैंकहरु लगानी गर्न किन उत्साहित देखिएका छैनन् ? कृषि क्षेत्रमा बैंकहरुको लगानी बढाउन के गर्नुपर्ने हुन्छ ? सुझाव दिनुहोस्। (10)

Section - D

9. सूचकाङ्क किन चाहिन्छ ? साधारण र भारित सूचकाङ्कको भिन्नता के हो ? सूचकाङ्क तयार गर्न आधार वर्षको छनौट गर्ने बेला ध्यान पुऱ्याउनुपर्ने कुरा के के हुन्। (5 + 5 = 10)
10. What is sample survey ? Discuss its advantage over census survey. (10)

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पदको प्रतियोगितात्मक लिखित परीक्षा

२०७३/११/५

समय: ३ घण्टा

क्र: द्वितीय।

पूर्णाङ्क: १००

विषय: एगु. इको. एण्ड मार्केटिङ्ग सम्बन्धी।

नेम प्रश्नहरूको उत्तर Section अनुसार हुनुहुनेछ, अन्यथा उत्तरपुस्तिका रद्द हुनेछ।

Section - A

Define relative humidity. Write down the effects of temperature and relative humidity on storage of grain legumes. (2 + 8 = 10)

What do you understand by farming system. Describe on - farm farming system research methods commonly adopted in Nepal. (3 + 7 = 10)

Section - B

Write the differences between leaching and percolation. Explain how nitrogen losses take place at the time of fertilizer application in the rice field? How will you minimized the losses? (2 + 6 + 2 = 10)

Highlight the importance of green manuring in rice crop. (10)

Section - C

Describe purity maintenance procedure commonly applied in maize crop in Nepal. (10)

What are the ways of error minimization in field food crop research? (10)

Define breeder seed. Write cultural practices for breeder seed production. (2 + 8 = 10)

Section - D

What are the types of weeds infesting rice crop in Nepal? Give example of two major weeds in each category and how can you control them without harmony environment? (10)

Write the importance of Direct Seeded Rice (DSR) in context of climate change. What are the major constraints of DSR in Nepalese condition? (4 + 6 = 10)

10. Highlight the importance of zero/ minimum tillage and justify the need and extension of this technology in Nepalese context. (5 + 5 = 10)

लोक सेवा आयोग
नेपाल कृषि सेवा, वाली संरक्षण समूह, राजपत्राङ्कित तृतीय श्रेणी (प्राविधिक)
पदको प्रतियोगितात्मक लिखित परीक्षा

२०७२/११/९

समय: ३ घण्टा

पूर्णाङ्क: १००

पत्र: द्वितीय।

विषय: बाली विकास सम्बन्धी

निम्न प्रश्नहरूको उत्तर Section अनुसार छुट्टै उत्तरपुस्तिकामा लेख्नुपर्नेछ, अन्यथा उत्तरपुस्तिका रद्द हुनेछ।

Section – A

1. Differentiate between climate and weather. Also illustrate with examples the effects of temperature on winter maize production in terai region of Nepal. (4 + 6 = 10)
2. Define farming system in the context of Nepal. What are the components of integrated farming systems in Nepal? (10)

Section – B

3. What are the basis of determining fertilizer requirement for a particular crop? Suggest measures to increase fertilizer use efficiency in paddy crop. (5 + 5 = 10)
4. List the common sources of organic matter and briefly explain about in - situ and ex - situ green maturing practices followed in Nepal. (3 + 7 = 10)

Section – C

5. What are the breeding methods for self – pollinated and cross pollination crops in Nepal? (10)
6. As a researcher 4 wheat varieties with 4 levels of nitrogens (N_1, N_2, N_3, N_4) are given to list, which designs do you apply and why? Also give the ANOVA. (8 + 2 = 10)
7. Differentiate between Seed Certification and Truthful Labelling (TL). Also list the descriptions required to put on TL tags. (6 + 4 = 10)

Section – D

8. Define tillage and its role in crop production. How efficiency and cost of tillage in crop production can be rationalized for increased cost saving? (5 + 5 = 10)
9. Explain critical weed control times in maize and give ideal weed management practices followed by the farmers. (10)
10. Describe stepwise methods of one most common method of nursery bed preparation and its management practices. (10)

लोक सेवा आयोग
राजपत्राकित तृतीय श्रेणी, कृषि सेवा, बाली संरक्षण समूहको
प्रतियोगितात्मक लिखित परीक्षा
२०६९/१०/२२

समय: ३ घण्टा
पत्र: द्वितीय।

पूर्णाङ्क: १००

विषय: एग्रोनोमी सम्बन्धी।

निम्न प्रश्नहरूको उत्तर Section अनुसार छुट्टै उत्तरपुस्तिकामा लेख्नुपर्नेछ, अन्यथा उत्तरपुस्तिका रद्द हुनेछ।

Section - A

1. What do you understand by climate change and how is it affecting agriculture production in Nepal? State with examples. (10)
2. What do you mean by crop rotation? Explain the principles of crop rotation. Also write down the advantages of crop rotation with practical examples. (10)

Section - B

3. How do the plant nutrients are lost from the soil and what are the measures to reduce the losses. (10)
4. Give the classification of nitrogenous fertilizers and explain in details of each with examples and nutrient content. (10)

Section - C

5. Write short notes on Plant Breeding method: (5 × 2 = 10)
 - a) Pure line method.
 - b) Mass selection method.
 - c) Pedegree method.
 - d) Bulk cross method.
 - e) Back cross method.
6. Explain clearly Randomized Complete Block Design of an experiment. (10)
7. What are the seed quality attributes? Which elements affect the seed attributes? Explain the seed quality control system of Nepal (10)

Section - D

8. Define 'weed' and explain how will you manage weeds in the rice and lentil. (10)
9. Explain in detail the cultural practices of winter maize. (10)
10. What are the objective of tillage? What is the influence of tillage on soil physical properties? Write how zero tillage helps in moisture conservation? (10)

संकेत लेख आयोग

नेपाल कृषि सेवा, कृषि तथा रसयुक्त, एकात्मिक ग्रामीण सेवा (आवधिक) परको
प्रविधोपयोगिक शिक्षण परीक्षा

२०७२/७३

परीक्षा १००

विषय: कृषि तथा रसयुक्त।

संकेत लेख आयोग, कृषि तथा रसयुक्त, एकात्मिक ग्रामीण सेवा (आवधिक) परको प्रविधोपयोगिक शिक्षण परीक्षा

Section - A

1. Define individual methods, group methods and mass methods of extension teaching and elaborate them with examples. Explain, how can they be best used for small and big farmers? (5 + 5 = 10)
2. What is leadership? Describe the roles of leadership in agriculture development. Also point out the qualities of a good leader. (2 + 5 + 3 = 10)
3. What is development communication? Illustrate how does S - M - C - R model work efficiently? Also, describe the importance of development communication in agriculture. (2 + 4 + 4 = 10)

Section - B

1. How do you conceptualize adoption process? What are the stages? State the adopter's categories and their characteristics by relating to adoption. (2 + 2 + 6 = 10)
2. What factors are responsible for the rate of adoption concerning the agro - technologies? How will you make it effective?
3. Mention agriculture extension approaches adopted in Nepal and state the best approach with your justification. (5 + 5 = 10)

Section - C

1. Discuss the importance extension approaches adopted in Nepal and state the best approach with your justification. (5 + 5 = 10)
2. What is the meaning of stakeholders in agriculture development process in Nepal with special reference to integrated rural agricultural development programme. (5 + 5 = 10)

Section - D

1. You are asked to prepare a project concept note (PCN) for a donor supported project to promote organic farming in your workplace district of Nepal. The total fund is five hundred thousand to be implemented in three VDCs within two years. Incorporate objective, activities, budget, outputs, monitoring and evaluation indicators in PCN. (3 + 3 + 4 = 10)
2. What are the importance of monitoring and evaluation? Explain, how do you monitor and evaluate in extension program? (10)

संकेत सेवा आयोग

सर्वसाधारण तृतीय श्रेणी, कृषि सेवा, कृषि प्रसार कार्यक्रमको प्रतिस्पर्धीतात्मक सिद्धिबत परीक्षा

२०६९/१११२

पूर्णाङ्कः १००

समय ३ घण्टा

का दिनोब

दिनांक कृषि प्रसार सम्बन्धी।

निम्न प्रश्नहरूको उत्तर नेपाली अनुसार लेख्नुहोस्। उत्तरहरूको संख्यात्मकता लेख्नुपर्ने कसैको उत्तरहरूको ताल मूल्यांकन।

Section - A

1. What is the role of agriculture extension in rural development? Describe in detail. (10)
2. How will the teaching method applied in a certain area will differ from those to be Applied in other non different area? Mention some factors which could be appropriately selected in different communities. (10)
3. What role the local leaders play in agricultural extension? (10)

Section - B

4. Identify and describe the essential elements of communication process. (10)
5. Provide a pathway of diffusion of a certain new technology. (10)
6. Write short notes on the following: (4 + 3 + 3 = 10)

Section - C

7. What are the agriculture extension systems/ approaches that have been implemented so far in Nepal? What do you understand by conventional extension system/approach? Briefly mention importance and scope of group approach of agriculture Extension in Nepal. (10)
8. Write short notes on:
a. Role of subject matter specialists in extension education. (5 + 5) = 10
b. Collaborative agricultural extension services. (5 + 5 = 10)

Section - D

9. Enumerate the principles of extension programme planning. Give reasons for considering bottom-up planning effective in extension education. (10)
10. How do you develop a quality proposal on vegetable cultivation relating with the poverty reduction target? Be specific and to the point in describing all the required elements of the proposal. (10)

लोक सेवा आयोग
राजपत्राङ्कित तृतीय श्रेणी, कृषि सेवा, बागवानी समूहको प्रतियोगितात्मक लिखित परीक्षा

२०७२/११/१६

समय: ३ घण्टा

पत्र: द्वितीय

पूर्णाङ्क: १००

विषय: बटिकल्चर सम्बन्धी

निम्न प्रश्नहरूको उत्तर Section अनुसार हुनुहुने उत्तरयुक्तिकासा लेख्नुपर्नेछ, अन्यथा उत्तरयुक्तिका रद्द हुनेछ।

Section - A

1. Government plans and policies have given priority on horticulture. However, the potentiality of fruit sector (an important component of horticulture) has not been exploited properly. In this context, discuss the current problems related to fruit crop development in Nepal. (5 + 5 = 10)
2. Organic farming in Nepal is defined in different way by different organizations; however, it has some basic concept, what is this? Elaborate its importance and possible obstacles for its effective implementation in Nepalese context. (2 + 4 + 4 = 10)

Section - B

3. What are the important climate factors that are considered as extreme environment stress? Suggest their possible control measures. (5 + 5 = 10)
4. What is seed dormancy? List types of seed dormancy and describe the methods of breaking seed dormancy. (3 + 3 + 4 = 10)
5. What do you understand by plant growth regulators? What are major growth regulators in use in horticultural crops? Mention with two uses of each. (1 + 5 + 5 = 10)

Section - C

6. Describe in brief the effects of less water (drought) stress in fruit crops and state the measures to overcome these effects. (5 + 5 = 10)
7. What do you understand by tissue culture? Describe its role in fulfilling the need of seed requirements to Nepalese farmers. (2 + 8 = 10)

Section - D

8. If a farmer from a river basin area (600m) comes to you and request for summer season cucumber cultivation technology what would be your advice to him? (10)
9. Describe various types of storage systems used in Nepal to store potato tubers. (10)
10. Define True Potato Seed (TPS). Do you see its scope in supplementing the requirement of potato seeds in Nepal? If so, how can it be improved? (2 + 4 + 4 = 10)

विषय: बाली संरक्षण सम्बन्धी

उत्तर Section अनुसार हल गर्नु उत्तरपुस्तिकामा लेख्नुपर्नेछ, अन्यथा उत्तरपुस्तिका रद्द हुनेछ।

Section - A

Post - harvest loss from perishable and durable commodities is obvious and loss reduction effort not sufficient in least developing countries like Nepal so, what are cases how we can prevent to reduce the losses from the perishable as well as durable commodities ? (5 + 5 =10)

What is internal and external quarantine and its importance in Nepalese agriculture system ? What are the quarantine insects and disease in Nepal for quarantine purpose? How phytosanitary certificate issued for export and import system in quarantine check post? Which crops and disease in most important for internal quarantine in Nepal? (10)

Section - B

How environment plays and important role for infectious disease development and advice to escape the attack of pathogenic diseases ? (5 + 5 = 10)

Explain current status of fruit fly of sweet orange in Nepal. Its distribution damage symptoms, biology and control measures of fruit fly in Nepal. (10)

रिपो विकास अहिलेको आवश्यकता र प्राथमिकता हो। कृषिमा रिपो विकासका लागि एकिकृत राष्ट्र जीव व्यवस्थापन (IPM) कार्यक्रमले कसरी फलदायी सक्छ ? स्पष्ट पार्नुहोस। (10)

Section - C

Through lights on the following in brief (5 × 2 =10)

- a) Soil born diseases
- b) Mango malformation
- c) Phytoalexins
- d) Obligate parasite
- e) Ug 99

Why club root is the most important disease of cruciferous crops. Describe causal organism, symptoms, disease cycle of this disease. Mention details, the control strategies of club roots. Is it quarantine disease ? If yes, how it spread from one place to another place. (10)

Section - D

Write five poisonous species of mushroom available in Nepal with its special characters. Describe various species of mushroom cultivated in Nepal. What are the medicinal value of different mushroom and how you suggest to reducing the cost of production of mushroom in Nepalese condition? (10)

What is quality standard in case of honey ? Due to quality standards the honey cannot export from Nepal to other countries; how we can improve our quality standard of honey for domestic and international market? (10)

What are the harmful effects of weeds in agricultural crops mainly in food crops of Nepal ? And how do you manage them (weeds of crop) including recommended dose of herbicides? (10)

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राजपत्राङ्कित तृतीय श्रेणी, कृषि सेवा, बाली संरक्षण समूहको प्रतियोगितात्मक लिखित परीक्षा

२०६९/१०/१५

समय: ३ घण्टा

पूर्णाङ्क: १००

पत्र: द्वितीय

विषय: स्नापट प्रोजेक्सन सम्बन्धी

निम्न प्रश्नहरूको उत्तर Section अनुसार छुट्याउँदै उत्तरयुक्तिकाग लेख्नुपर्नेछ, अन्यथा उत्तरयुक्तिका रद्द हुनेछ।

Section - A

1. Write short notes on: (5 × 2 = 10)
- International Plant Protection Convention.
 - Sanitary and Phytosanitary Measures (SPC).
 - International code of conduct on the distribution and use of pesticides.
 - Climate change.
 - Biological control:
2. Write short notes on:
- Importance, issues, challenges and roles of plant quarantine in Nepalese agriculture system in agro forestry trade facilitation in Nepal.
 - Harmonisation of plant quarantine measures as per international plant Protection convention.
 - Define and Explain IPM and illustrate its 4 principles along with 1 typical example of rice and vegetable pest.
- Section - B
- Describe in detail the distribution, nature of damage, life - history and control measure of pumpkin fruitfly (*Bactrocera cucurbitae*).
 - Describe the importance and management of fruit borer of vegetable in Nepal.

Section - C

- Describe in detail yellow rust disease of wheat. Give its symptom, causal agent, disease cycle. Give economically friendly management practice to control it. (10)
- What are different seed - borne disease. Describe their significance and management technologies. (10)

Section - D

- Write down the cultivation technique of bottom mushroom. Describe the food value of mushroom. (10)
- Describe the prospect of sericulture and silk industry in Nepal. How is mulberry cultivation practice and its management adopted in Nepal? (10)
- Write short notes on the following: (5 × 2 = 10)
 - Weed management
 - Culture media
 - Types of sprayer
 - Herbicides
 - Sterilization

विषय: बाली संरक्षण सम्बन्धी

प्रश्नको उत्तर Section अनुसार बुझ्नुहोस्। उत्तर युस्तिका मा लेख्नुपर्नेछ, अन्यथा उत्तर युस्तिका रद्द हुनेछ।

Section - A

What is the importance of agricultural entomology? How insects become the pest of crops? and then, what biological attributes are associated with the insect species to predominate the other pest species in animal kingdom ?

Give the short descriptions of below mentioned sub-headings:

- a) Types of pesticide formulation. (10)
- b) WHO classification of pesticide by 'Hazard'. (10)
- c) Safe use pesticides. (10)
- d) Pesticide poisoning symptoms and first treatments. (10)

Section - B

Mention the principles and practices of plant protection as well as the significance in insect pest to huma beings. (10)

What are the most important sucking pests of various crops with host range ? Mention its Sociology and effective control measures for different sucking pest in tomato and onion crops. (10)

Potato tuber moth is one of the major pests of potato. What is its scientific name? Write about severity, life cycle and management options that are being recommended in Nepal. (10)

Section - C

Write short notes on the following : (5 x 2 =10)

- a) Control measures of late blight of potato.
 - b) Symptoms of red rot of sugarcane
 - c) Cultural medium for insect fungi
 - d) Autoclaving
 - e) Survey and surveillance
- Give the diagnosis methods of bacterial leaf blight in banana and other crops. Give with suitable examples in field diagnosis. (5 + 5 = 10)

Section - D

What are the important species of honey bee available in Nepal? Why indigenous honey bee is important for bio-diversity conservation ? Describe detail the tips for production of quality standard honey for exportable purpose in Nepal. (10)

Describe the steps in plant disease development with cyclic order ? What are the major strategies adopted in managing plant disease in Nepal ? (10)

Write short notes on following sub-headings:

- a) Importance of plant diseases. (4)
- b) Disease evolution in coffee and potato is Sri Lanka and Ireland (3)
- c) Institutions involved in plant disease management in Nepal (3)

लोक सेवा आयोग
नेपाल कृषि सेवा, माटे, विज्ञान समूह, राजपत्राधिकार तृतीय श्रेणी, प्रतियोगितात्मक लिखित परीक्षा

२०७३/११/२२

पूर्णाङ्कः १००

समयः ३ घण्टा

पत्रः द्वितीय

विषयः माटे विज्ञान सम्बन्धी

निम्न प्रश्नहरूको उत्तर Section अनुसार छुट्टै छुट्टै उत्तरपुस्तिकामा लेख्नुपर्नेछ, अन्यथा उत्तरपुस्तिका रद्द हुनेछ।

Section - A

1. Describe the influence of soil pH on the nutrient availability and microbial activities write down the methods to determine the pH of the soil. (10)
2. Write down in short the importance of soil physical properties in the management of irrigation, soil fertility maintenance and crop production. (10)
3. What is soil and briefly describe the four major components of soil ? (10)

Section - B

4. It the term soil pH and soil acidity synonymous ? In major part of Mustang soil pH is alkaline what may be the reason behind it and how are farmer's managing these soils ? Can the use of gypsum help in improving these soils ? Discuss in brief. (2 + 3 + 2 + 3) = 10
5. Define soil infiltration and percolation. How these two phenomenon are important for soil conservation ? Define the term plant available water and it's importance in irrigation management in different types of soil. (5 + 5 = 10)

Section - C

6. Why nitrogen is considered as most limiting nutrients in crop production in Nepal ? Describe its sources and methods of application. (5+ 5 = 10)
7. In modern agriculture the role of soil micro - organism is important why? (10)
8. Describe the importance of nitrogenous fertilizer and their sources used in Nepal. Give five reasons why its consumption is more in terai than in hills. 10

Section - D

9. Why and how soil survey is done in agricultural land and describe how many types of soil survey methods are practiced in Nepal ? (10)
10. What is soil erosion and what are its major causes? What do you think should be done to minimize the soil erosion problem ? Discuss making it contextual to Nepal (10)

Section - A

Generally there is decrease of soil organic matter and nitrogen in Nepalese soils. How will you suggest to farmers for maintaining soil fertility? (10)

Describe briefly the differences between chemical fertilizer and organic manures with examples and your suggestion to the farmers for their use. (10)

Write short notes on the following: (5 x 2 = 10)

- a) Soil and organic colloids.
- b) Cation Exchange Capacity (CEC)
- c) Soil pH (soil reaction)
- d) Vermiculite
- e) Buffering capacity

Section - B

What is the implication of field capacity, wilting points and saturation points in relation to plant available moisture? (10)

What is acidic and alkaline soils? How will you correct them? (10)

Section - C

What do you know by Biological Nitrogen Fixation (BNF). What type of crops can fix the atmospheric nitrogen biologically? (10)

What is the major roles of macro and micro organisms in decomposing soil organic matter in soils? (5)

Describe the nitrogen losses reduction mechanism and ensure availability of nitrogen throughout the growth period of a crop? Describe ways to enhance and nitrogen use efficiency. (5 + 5 = 10)

Section - D

Describe the important soils (USDA soil taxonomy) that are found ancient terraces and river basins of the midhill of Nepal. Related with production potentially and management of these soils. (10)

What is soil erosion? What are the major factors causing soil erosion in Nepal? (10)



प्रदेश लोक सेवा आयोग

कोशी प्रदेश, विराटनगर

प्रदेश निजामती तथा स्थानीय सरकारी सेवा अन्तर्गत प्राविधिक तर्फ कृषि सेवा, एग. इको. एण्ड मार्केटिङ्ग/कृषि प्रसार/बागवानी/बाली संरक्षण/बाली विकास समूह, अधिकृतस्तर सातौं तह, कृषि अर्थ विज्ञ/कृषि प्रसार/बागवानी विकास/बाली संरक्षण/ बाली विकास अधिकृत वा सो सरह पदको खुला प्रतियोगितात्मक लिखित परीक्षा

मिति:- २०८१/११/१०

समय: ३ घण्टा

पत्र: द्वितीय

पूर्णाङ्क: १००

विषय: सेवा सम्बन्धी विषय

सबै प्रश्नहरू अनिवार्य छन्। प्रश्नहरूको उत्तर खण्ड (Section) अनुसार बेग्लाबेग्लै उत्तरपुस्तिकामा लेख्नुपर्नेछ अन्यथा उत्तरपुस्तिका रद्द हुनेछ। परीक्षामा मोबाइल लगायत विद्युतीय उपकरणहरू प्रयोग गर्न पाइने छैन।

Section -A

Marks-25

1. What is Information Communication Technology in agriculture (ICT)? Write short notes about ICT with examples applicable for agriculture sector? [5]
2. What challenges can hinder the successful diffusion of new agricultural technologies in remote areas of Nepal? Considering the context of federalization, how can the Koshi province Government adopt information and communication technologies to promote sustainable agricultural practices? [4+6=10]
3. Define commercial agriculture. What is the importance of agricultural marketing for commercialization in Nepal? Give spider diagram of value chain in ginger. [2+4+4=10]

Section -B

Marks-25

4. Write short notes on seed standard and field standard in the context of seed production. [5]
5. What are crop growth and yield contributing parameters of rice? How can we mitigate the effect of climate change on rice productivity? [5+5=10]
6. Describe how the new variety of crop is developed? Describe about hybrid seed production of rice through research sector in Nepal. [5+5=10]

Section -C

Marks-25

7. Write short notes on:
a. Banana weevil b. Plant hormones c. Postharvest losses in fruit and vegetables [1+2+1]
8. "High density planting in major fruit crops is opening the new dimension of production", explain this statement. What are the limitations and factors to be considered for this type of cultivation practices? [5+5=10]
9. Shortly describe about the seedling production technology in large cardamom. What are the modern post-harvest technologies in large cardamom for quality maintenance? Describe with examples. [5+5=10]

Section -D

Marks-25

10. Enlist the major cultivated species of mushroom in Nepal. Write in short about the cultivation techniques of SHIITAKE mushroom. [5]
11. In recent years, banana farmers are facing heavy economic loss due to the noxious plant disease called Panama wilt. Describe its causal organism, its mode of transmission and symptoms. Suggest pragmatic ways for effectively managing this disease on the infected farm, considering proper safeguard for new production areas of Koshi Province. [1+2+2+5=10]
12. What are the general objectives and principles of IPM? Describe the IPM approach to control the insect pest of potato? [1+2+6=10]

<<The End>>

लोक सेवा आयोग

नेपाल कृषि सेवा, कृषि प्रसार/बागवानी/बालि विकास/बाली संरक्षण/माटो विज्ञान/एगू इको एण्ड मार्केटिङ्ग समूह,
राजपत्रांकित तृतीय श्रेणी (प्राविधिक) पदको प्रतियोगितात्मक लिखित परीक्षा

मिति: २०८१/११/१३

समय: ३ घण्टा

पूर्णाङ्क: १००

पत्र: द्वितीय

बिषय: Technical Subject

तलका प्रश्नहरूको उत्तर Section अनुसार छुट्टाछुट्टै उत्तरपुस्तिकामा लेख्नुपर्नेछ।

Section – A

25 Marks

1. What are the key differences between comparative and competitive advantage? Explain with examples. 2+3=5
2. Describe the current technology transfer mechanism in Nepal within the context of the Research-Education-Extension continuum. Evaluate its effectiveness and limitations in facilitating technology transfer. 5+5=10
3. What are the key steps involved in conducting a Farmers' Field School? What are its advantages and disadvantages in the context of Nepal? Elaborate. 4+3+3=10

Section – B

25 Marks

4. What are the standard procedures in quality seed production? Explain with proper illustrations. 2+3=5
5. What are the causes of soil acidity? Explain clearly its effects on plant growth and management practices of soil acidity. 2+3+5=10
6. Mention the important underutilized crops of Nepal. Explain their roles to sustain food and nutritional security with respect to the determinants of farming system of Nepal. 4+6=10

Section – C

25 Marks

7. Describe thoroughly and the salient uses of bio-technology in plant breeding. 5
8. Large cardamom (*Ammomum subulatum*) is major agricultural export commodity. Mention recommended varieties of cardamom so far domain wise and discuss package of practices from nursery management to processing. 4+6=10
9. What are the causes of post-harvest loss in fruits and vegetables? Describe the measures to minimize these losses in detail. 3+7=10

Section – D

25 Marks

10. What is safe use of pesticides? Enlist practices and procedures. 2+3=5
11. Bacterial wilt (*Ralstonia Solanaceanum*) of Solanaceous vegetables is one of the threats on vegetable production in Nepal. Describe clearly on its disease cycle, symptoms, diagnostic techniques and the major management options. 2+2+2+4=10
12. "Mushroom cultivation is important for small farmers' income and nutrition" justify. Explain step wise process of oyster mushroom cultivation practices. 5+5=10

««The End»»

David Prasad Michael Colter

Actual Exam 1998 (DH)
AESA
11/11