SIT

2010
AGRICULTURE - II (Optional)

200099

Standard : Degree ***Total Marks : 200***

Nature : Conventional ***Duration : 3 Hours***

Note :

(i) *Answers must be written in **English** only.*

(ii) *Question **No. 1** is **Compulsory.** Of the remaining questions, attempt **any four** selecting one question from **each section.***

(iii) *Figures to the **RIGHT** indicate marks of the respective question.*

(iv) *Number of optional questions upto the prescribed number in the order in which they have been solved will only be assessed. Excess answers will not be assessed.*

(v) *Credit will be given for orderly, concise and effective writing.*

(vi) *Candidate should not write roll number, any name (including their own), signature, address or any indication of their identity anywhere inside the answer book otherwise he/she will be penalised.*

(vii) *For each slab of 10, 15 and 20 marks, the examinee is expected to write answers in 125, 175 and 250 words respectively.*

1. Answer the following (10 Marks each) : **40**

(a) Discuss relevant sections of PVPFR 2002 in helping farmers preserve their seeds and lines.

(b) Explain the following :
- (i) Bacillus thuringiensis (B.T.)
- (ii) Wettable powder (W.P.)
- (iii) Semio chemicals
- (iv) Rotenone
- (v) Aluminium phosphide

(c) Discuss the role of "World declaration and Plan of action for nutrition" in Indian Context. What has been the role of midday meals in improving nutrition status of Indian rural school going children.

(d) Explain how remote sensing helps in Supply Chain Management (SCM) in Indian agriculture with relevant examples.

P.T.O.

Marks

SECTION - A

2. Answer the following sub-questions :

(a) Explain the structure of ribosome and how its structure helps the protein synthesis. **15**

(b) Explain how bridge cross has helped the transfer of genes from wild species into cultivated species with relevant examples. **10**

(c) What are common methods of breaking dormancy and how they are used in germplasm on conservation. **15**

3. Answer the following sub-questions :

(a) Explain how chromosomes achieve high degree of packing during cell division, yet regular transcription is carried out. **15**

(b) What is 'Apomixis' ? How apomictics will be used to produce permanent hybrids in future ? **10**

(c) How manipulating RUDP carboxylase increases photosynthetic activitiy ? **15**

SECTION - B

4. Answer the following sub-questions :

(a) (i) Define disease forecasting system and its importance in disease management. **10**

(ii) Explain characteristics of micoplasma causing plant diseases.

(b) (i) Write causal organism, symptoms and management of black rust disease of wheat.

(ii) Write causal organism, symptoms and management of smut disease of wheat.

(c) (i) Describe characteristics of order Orthoptera and its families of economic importance. **10**

(ii) Describe the insect Painted bug under following heads :

(A) Marks of identification

(B) Nature of damage

(C) Extent of losses

(D) Life cycle

(E) Management

Marks

(d) (i) Define Biological control of insect-pests; describe qualities of an ideal bio-agent. **10**

(ii) Describe TUNDER disease of wheat under following heads.

(A) Causal organisms

(B) Extent of losses

(C) Symptoms

(D) Life cycle

(E) Management

5. Answer the following sub-questions :

(a) (i) Explain biological control of plant diseases with examples. **10**

(ii) Characteristics of Fungi causing plant diseases.

(b) (i) Write causal organism, symptoms and management of green ear disease of bajra. **10**

(ii) Write causal organism, symptoms and management of white rust disease of mustard.

(c) (i) Define Integrated Pest Management (IPM) with its objectives. **10**

(ii) Describe Tobacco caterpillar under following heads.

(A) Marks of identification

(B) Nature of damage

(C) Extent of losses

(D) Life cycle

(E) Management

(d) (i) Write non-chemical methods of gram pod borer control. **10**

(ii) Explain the root knot disease of brinjal under following heads.

(A) Causal organism

(B) Extent of losses

(C) Symptoms

(D) Life cycle

(E) Management

Marks

SECTION - C

6. Answer the following sub-questions :

(a) "Present rise in the prices of food items is not solely due to underproduction". Comment. **10**

(b) List the important indigenous breeds of cattle of Maharashtra along with their important characters. What are the steps taken to conserve them. **15**

(c) "India being the centre of origin for egg plant and okra, introduction of BT lines in these crops will be detrimental to genetic diversity". Comment. **15**

7. Answer the following sub-questions :

(a) Explain how global warming is affecting food production in our Country. **10**

(b) Discuss the role of Government Policies in increasing the poultry production in your state. Also discuss how the state can mitigate recurring poultry epidemics. **15**

(c) What is gene silencing. How this will help improve the shelf life of vegetables. What are the negative aspects of this technology. **15**

SECTION - D

8. (a) Give answer accordingly : **15**

(i) List out the economic principles applied to farm management.

(ii) What are the steps followed in complete budgeting ?

(iii) What is marketing efficiency ? How it is measured ?

(iv) What are the factors affecting farming ?

(v) What are the functions of Food Corporation of India ?

(b) Give answer accordingly : **15**

(i) Explain how would you proceed to evaluate an extension programme.

(ii) Explain and illustrate the role and importance of audio-visual aids in extension education.

(iii) "Mass media are class media". Justify.

(iv) What is the role of KVK in transfer of agricultural technology and in promoting Agricultural Development ?

(v) What is the significance of Agricultural Extension in current scenario ?

P.T.O.

Marks

(c) Give answer accordingly : 10

(i) Why is ATMA ? What are the aims and objectives of ATMA ?

(ii) Write a brief note on factors that initiated IVLP and its objectives.

(iii) What is TAR ? Explain in brief about the salient features of TAR.

(iv) How will you differentiate between the public and private agencies in playing a vital role in the development of Agricultural extension ?

(v) What is the concept of 'Agri-clinics' ? Describe the need and importance of Agri-clinics in meeting the requirements of farming community.

9. (a) Give answer accordingly : 15

(i) Present partial budgeting technique with an example.

(ii) What are systems of farming ? Write about any two systems.

(iii) What are the objectives of the regulated market ?

(iv) How cooperative marketing can help to solve marketing problems of the farmers ?

(v) Briefly explain the time comparison principle.

(b) Give answer accordingly : 15

(i) Explain how would you justify the suitability of single window system of organization to Indian Environment.

(ii) Give a brief account on types of communication according to the directions of flow in an organization.

(iii) What is the significance of Socio-Economic Survey in identifying the status of farming community with suitable examples ?

(iv) Briefly enumerate the advantages and limitations of Audio-Visual aids in extension education.

(v) "The Green Revolution could not have come about so crucially without use of Mass Media". Discuss.

(c) Give answer accordingly : 10

(i) What is the purpose of establishing Kisan Call Centres and give a brief note on its objectives ?

(ii) Give your understanding on how revolution of Information Technology played a key role in promoting the growth of Agricultural Extension.

(iii) Clearly explain the significant role of Private Agencies in modern time.

(iv) Explain the salient features of IRDP.

(v) Give a brief account on Transfer of Technology role played by Lab to Land Programme.

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