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FOR MANIPUR CLASS 11 PREPARATION

Manipur Board Class 11 Syllabus 2027 Agriculture

EXAM	YEAR	TYPE	SUBJECT
Manipur Class 11	2027	Syllabus	Agriculture

DESIGN OF QUESTION PAPER

Subject : AGRICULTURE
Paper : Theory
Class : XI
Full Marks : 70
Time : 3 Hours

I. WEIGHTAGE TO OBJECTIVES :

Objectives	Marks	Percentage
Knowledge (K)	10	15
Understanding (U)	35	50
Application (A)	21	30
Skill (S)	04	05
Total :	**70**	**100**

II. WEIGHTAGE TO FORM OF QUESTIONS :

Form of questions	No. of Questions	Time (in minutes)	Marks	Percentage
Essay/Long Ans. (E/LA)	03	60	15	21
Short Ans. (SA-I)	06	37	18	26
Short Ans. (SA-II)	10	40	20	29
Very Short Answer (VSA)	07	21	07	10
MCQ	10	22	10	14
Total :	**36**	**180**	**70**	**100**

III. WEIGHTAGE TO CONTENTS :

Unit / Content:			Marks	Percentage
A	Agriculture and Crop Production	i) Scope and Importance	5	7
		ii) Physical Environment	12	17
		iii) Agriculture Economics and Crop Production	15	22
B	Genetics and Plant Breeding	i) Genetics and Plant Breeding	13	18
C.	Livestock Production	i) Scope and Importance	5	7
		ii) Care and Management	15	22
		iii) Bio-Waste Management and Govt. Scheme	5	7
		Total :	**70**	**100**

IV. SCEHEME OF SECTIONS : A, B and C

V. SCHEME OF OPTIONS : Internal option may be given in Essay Type Question

VI. DIFFICULTY LEVEL :

Difficult : 35 % of the total marks
Average : 50 % of the total marks
Easy : 15 % of the total marks

Abbreviation : K(Knowledge), U(Understanding), C(Comprehension), Exp.(Expression), Skill(S), E(Essay Type), SA (Short Answer Type), VSA (Very Short Answer Type), MCQ(Multiple Choice Question)

AGRICULTURE
THEORY
CLASS XI

One Paper **Time: 3 Hours** **70 Marks**

Section	Units	Marks	
		Unitwise	Total
I	**Part A** Agriculture and Crop Production • Unit: I: Scope and Importance • Unit: II: Physical Environment • Unit: III: Agriculture Economics and Crop Production	 5 12 13	 30
	Part B Genetics and Plant Breeding • Unit: IV Genetics and Plant Breeding	 15	 15
II	Livestock Production • Unit V: Scope and Importance • Unit VI: Care and Management • Unit VII: Bio-waste Management and Government Schemes	 5 15 5	 25
	Total		**70**

SECTION - I

PART A - AGRICULTURE AND CROP PRODUCTION:

Unit I: Scope and Importance:

- Definition of Agriculture, its branches
- Scope in the national economy and employment

Unit II: Physical Environment:

1. Climate and Weather, elements of Weather: Rainfall, Temperature, Humidity, Wind, Sunshine, Climate Change and Global warming.
2. Soil, Soil texture and structure and its types.
3. Soil erosion and Soil conservation.
4. Tillage definition and types. Concept of conservation tillage.

Unit III: Agriculture Economics and Crop Production

1. Agricultural Economics, Cooperative system in Agriculture, Crop insurance. Kisan Credit Cards. Marketing of Agricultural products (supply chain, retailing, wholesale), haats.

2. Package of practices in field crops like important varieties, seed rate, sowing time, intercultural operations, yield and marketing for Rice, Maize, Mustard, Soyabean, Groundnut, Pea, Sugarcane, gram & broad bean.

3. Package of practices of fruits: Mango, Banana, Lime, Grape, Pomegranate. Vegetables: Potato, Tomato, Cauliflower, Cabbage, Brinjal, Bottle gourd, Pumpkin, Cucumber. Flower- Rose, Gladiolus.

4. Methods of plant propagation – Layering and Cutting, and Tissue culture.

PART B - GENETICS AND PLANT BREEDING

Unit IV: Genetics and Plant Breeding

1. Cell and its structure, cell division-Mitosis and Meiosis and their significance in plant growth and development.
2. Introduction to -DNA, RNA, and their differences.
3. Role of Genetics in Plant breeding, self and cross-pollinated crops, methods of breeding in field crops-introduction, Selection, Hybridization, Mutation.
4. Mendel's laws of Inheritance. Their importance in plant breeding.

SECTION - II: LIVESTOCK PRODUCTION

Unit V: Scope and Importance

(a) Importance of livestock in Agriculture, National Economy and Nutritional security

(b) Important animal based food products and their role in our diet.

(c) Important indigenous and exotic breeds of cattle, buffalo and poultry, and quantitative and qualitative production details of produces (milk, meat and eggs)

(d) Concept of Anand pattern of cooperative system of milk procurement and pricing of milk. Marketing of milk in India.

Unit VI: Care and Management

(a) Animal body structure and functions.
(b) Concept of grazing and stall feeding including poultry feeding.

(c) Principles of feeding, feeding practices; Important fodder crops; Silage and Hay preparation; Balanced ratio-definition and ingredients.
(d) Housing of dairy animals and poultry.
(e) Management of calves, bullocks, pregnant and milch animals as well as chicks and layers.
(f) Economics of rearing dairy cattle , poultry.
(g) Systems of milking by hand and by machine. Important considerations in both these methods.
(h) Concept of clean milk production processing, pasteurization and packaging and milk. Familiarisation with the value added products from milk.
(i) Principles of disease management and vaccination.
(j) Signs of sick animals, symptoms of common diseases in cattle and poultry-Rinderpest, Black quarter, Foot and Mouth, Mastitis, Haemorrhagic Septicaemia, Solmonellosis, bird flu, Fowl Pox and Ranikhet disease, their prevention and control.

Unit VII: Bio-Waste Management and Government Schemes

(a) Utilization of animals wastes in Biogas plant.

(b) Important government schemes for development of livestock dairy, poultry in India. Their important features and eligibility criteria.

AGRICULTURE
CLASS XI
PRACTICAL

One Paper **Time: 3 hours** **30 marks**

Section	Units	Marks
I	Part A-Agriculture and Crop Production	08
	Part B- Genetics, Plant Breeding and Microbiology	04
II	Livestock practical	08
	Reports of the visit	05
	Viva voce	05
	Total	30

SECTION - I

PART A - AGRICULTURE AND CROP PRODUCTION

1. Agriculture and Crop Production

(a) Visit to a crop field. Identify different crops growing in the field and make a report.

(b) Identification of farm implements used for different operations, draw a design of at least 5 implements and make a report.
(c) Identification of seeds of different crops.
(d) Seed germination test. (two cereals , two pulses, two vegetables, two flowers)
(e) Calculation of cost of production of rice crop in one hectare of land area & prepare a report.
(f) Visit to an orchard and identify different fruit crops and make a report.
(g) Identification of important vegetable crops, prepare a report.
(h) Identification of important flower crops.
(i) Orchard layout, digging of pits and planting of sapling of any one fruit crop.
(j) Land preparation and sowing of rice crop seed in the bed.
(k) Preparation of cropping scheme.

SECTION – II

2. Livestock

(a) Identification of body parts of dairy animals and Poultry.
(b) Identification of common breeds of cows, buffaloes and poultry birds.
(c) Handling and restraining of animals.
(d) Testing of milk fat and SNF.
(e) Visit to a local veterinary hospital and observe the condition of a sick animal and prepare a report.
(f) Compute ration for an animal and poultry and prepare a report.
(g) Visit to milk processing plant and on outlet a milk & milk products centre. Record the processing & sale of variety in milk based products.
(h) Identification of feeds, fodder crops and grasses.
(i) Visit to Biogas plant.

3. Report on the Visits

1. The student have to prepare a report of their visit to different organizations and submit to the subject teacher for the evaluation. The report must contain the student's original work and observations.
2. Prepare Herbarium of different crops and weed species. The leaves of the crops and weeds are pressed dried and mounted on the Herbarium sheet.

4. Viva Voce

Students can be asked questions based on:

(i) Identification of objects
(ii) Visit Report analysis.
(iii) Experiences in their field visits, etc.

A range of 5 to 10 questions can be asked depending on the response of the student. Evaluation 5x1=5
Or should be based on number of questions answered. Evaluator should stick to the time and ½ x10=5
number of questions.

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PRESCRIBED TEXT BOOKS FOR CLASSES XI AND XII:

1. Handbook of Animal Husbandry
   Published by : Directorate of Information and Publications of Agriculture, Indian Council of Agricultural Research, Krishi Anusandhan Bhavan, Pusa, New Delhi – 110012.

2. A Text Book of Animal Husbandry by G.C. Banerjee
   Published by Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.

3. Hand Book of Agriculture – ICAR publication
   or
   Hand Book of Agriculture by S.C. Panda,
   Published by : J.V. Publishing House, Jodhpur.

4. A text book of Plant Breeding by Purohit & Purohit,
   Published by : J.V. Publishing House, Jodhpur.

5. A text book of Genetics by Purohit & Purohit,
   Published by : J.V. Publishing House, Jodhpur.

6. A text book of Production Technology of fruits crops by Prasad & Raju,
   Published by : J.V. Publishing House, Jodhpur.

7. A text book of Production Technology of Vegetables & Flowers by Prasad , Raju & Bhardwaj,
   Published by : J.V. Publishing House, Jodhpur

8. A text book of Field Crops by Mukund Joshi,
   Published by : PHI Learning Private Ltd., Delhi.

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