

**SYLLABUS FOR DIRECT RECRUITMENT OF GRADE-V
(GROUP 'A' GAZETTED) OF THE MIZORAM AGRICULTURE SERVICE**

1. Details of Syllabus

GENERAL ENGLISH

General English Paper I	: 100 Marks
(a) Essay Writing (Conventional)	: 10 Marks
(b) Précis Writing (Conventional)	: 15 Marks
(c) Letter Writing (Conventional)	: 10 Marks
(d) Idioms & Phrases (Conventional)	: 10 Marks
(e) Expansion of passages (Conventional)	: 10 Marks
(f) Comprehension of given passages (Conventional)	: 10 Marks
(g) Grammar : (Objective type)	: 10 Marks
Parts of Speech : Nouns, Adjective, Verb, Adverb, Preposition etc.	
(h) Composition (Objective type)	: 15 Marks
i) Analysis of Complex and compound sentences	
ii) Transformation of Sentences	
iii) Synthetics of sentences	
iv) Correct usage and vocabularies (Objective type)	: 10 Marks

2. TECHNICAL SUBJECT (AGRICULTURE) PAPER – I (OBJECTIVE TYPE) : 150 Marks

Ecology and its relevance to man, natural resources, their sustainable management and conservation. Physical and social environment as factors of crop distribution and production. Climate elements as factors of crop growth, impact of changing environments. Environmental pollution and associated hazards to crops, animals and humans. Cropping patterns in different agro-climatic zones of the country, impact of high yielding and short-duration varieties on shifts in cropping pattern. Concepts of multiple cropping, multistory, relay and inter-cropping, and their importance in relation to food production. Package of practices for production of important cereals, pulses, oil seeds, fibers, sugar, commercial and fodder crops grown during Kharif and Rabi seasons in different regions of the country.

Weeds: their characteristics, dissemination and association with various crops, their multiplications, cultural, biological and chemical control of weeds.

Soil-physical, chemical, land biological properties. Processes and factors of soil formation, Modern classification of Indian soils, mineral and organic constituents of soil, land, their role in maintaining of soil productivity. Essential plant nutrients and other beneficial elements in soil and plants. Principles of soil fertility and its evaluation for judicious fertilizer use, integrated nutrient management. Losses of nitrogen in soil, nitrogen fixation in soils. Fixation of phosphorus and potassium in soils and the scope for their efficient use. Problem soils and their reclamation methods.

Soil conservation: planning on watershed basis, Erosion and run-off management in hilly, foothills and valley land, processes and factors affecting them, Dry land agriculture and its problems, Technology of stabilizing agriculture production in rain-fed agriculture area.

Water-use efficiency in relation to crop production, criteria for scheduling irrigations, ways and means of reducing run-off losses of irrigation water, Drip and sprinkler irrigation, Drainage of water logged soils, quality of irrigation water, effect of industrial effluents on soil and water pollution.

Farm Management: scope, importance and characteristics, farm planning, Optimum resources use and budgeting, Economics of different types of farming systems, marketing and pricing of agriculture inputs and outputs, price fluctuations and their cost, types and systems of farming and factors affecting them.

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Agriculture extension: its importance and role, methods of evaluation of extension programs, socio-economic survey and status of big, small and marginal farmers and landless agricultural laborers, farm mechanization and its role in agricultural production and rural employment, Training programmes for extension workers, lab-to-land programmes.

3. TECHNICAL SUBJECT (AGRICULTURE) PAPER – II (OBJECTIVE TYPE) : 150 Marks

Seed Technology: its importance, Different kinds of seeds and their seed production, processing techniques, Polyploidy, euploid and aneuploids, Mutation-micro and macro, and their role in crop improvement. Laws of heredity, their significance in plant breeding.

Application and principles of plant breeding to the improvement of major field crops, Role of biotechnology in plant breeding, Improved varieties, hybrids, composites of various crop plants.

Growth and development: photoperiodism and vernalization, Auxins, hormones and other plant regulators, and their mechanism of action and importance in agriculture, Physiology of seed development and germination, dormancy.

Climatic requirements and cultivation of major fruit plants, vegetable crops and flower plants, the package of practices and their scientific basis. Handling and marketing problems of fruit and vegetables. Principal methods of preservation of importance fruits and vegetable products, processing techniques and equipment, Role of fruits and vegetables in human nutrition, Raising of ornamental plants, design and layout of lawns and gardens.

Diseases and pests of field vegetables, orchard and plantation crops of India, Causes and classification of plant pests and diseases, Integrated pest and disease management, Pesticides, their formulation and modes of action, storage pests and diseases of cereals and pulses and control.

Impact of advanced agricultural technology hazards, its adverse effect, sustainable agriculture, need of hour, organic agriculture system, major aims of organic farming, concept, definition, differences between organic and conventional farming, history and needs of organic farming.

Biodynamic agriculture, organic farming versus biodynamic farming, EM, Principles of biodynamic farming, biodynamic preparation, vermi-composting, methods of organic matter recycling; in situ, ex situ, and biological manuring. Useful and adverse effect of organic farming.

Ecological pest management, nitrogen fixing trees, its importance, bio-intensive nutrient management, certification of organic produce.

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4. VIVA VOCE (INTERVIEW) : 50 Marks

Viva Voce (Interview) call was purely made on the merit position base of the candidates. Unless regulated by the Examination Regulation the maximum marks carried by an interview will be 50 which was 12.5% of the total marks of 400 in the written examination. The final result will be based on the total of marks a candidates obtained in the written as well as in the interview. Recommendation shall be made in order of merit for the number of vacancies available.