Annexure-A

Syllabus for the posts of Junior Agriculture Extension Officer (JAEO).

- Agriculture, its importance in natural economy, factors determining agro ecological zone and geographic distribution of plants. **(15 marks)**
- Important crops of India with special reference to the crops grown in Jammu and Kashmir. Cultural practices for cereals, pulses, oil seeds,sugar and tuber crops. Scientific basis for crop rotation, multiple and relay cropping, inter cropping and mixed cropping. **(20 marks)**
- Soil as a medium of plant growth and its composition, mineral and organic constituents of the soil and their role in crop production, physical, chemical and biological properties of the soil. Essential plant nutrients, their functions, occurrence of cycling in soils, principles of soil fertility and its evaluation for judicious fertilizer use. Organic manures and fertilizers, straight fertilizers, complex and mixed fertilizers manufactured and marketed in India.**(20 marks)**
- Farm planning and resource management for optimal production. Farming systems and their role in regional economies. **(15 marks)**
- Agriculture extension, its importance, philosophy, principles and objectives of agriculture extension. Extension organization at the State, District and Block levels, their structure, functions and responsibilities. Methods of communication, role of farm organizations in extension service. Socio economic survey and status of big, small and marginal farmers and agricultural landless labourers. Farm mechanization and its role in agricultural production and rural employment. Training programmes for extension workers ,lab to land programmes.**(25 marks)**
- Principles of plant physiology with reference to plant nutrition, absorption, translocation of nutrients. Diagnosis of nutrient deficiencies and treatment, photosynthesis, respiration, growth and development, auxins and hormones in plant growth.**(15 marks)**
- Important fruit and vegetable crops of Jammu and Kashmir, landscape and floriculture including raising of ornamental plants and design and layout of lawns and gardens. Principles and methods of preservation of important fruits and vegetables. **(10 marks)**
- Elements of Genetics and plant breeding as applied to improvement of crops, development of plant hybrids, important varieties of major crops.**(10 marks)**
- Serious pests and diseases of major crops, causes and classification of plant diseases, principles of pest control, Integrated control of pests and diseases, plant protection equipments, their care and maintenance. Biological control of plant diseases.**(20 marks)**