ANNEXURE – II

SCHEME OF EXAMINIATION FOR VILLAGE SERICULTURE ASSISTANTS

Written examination (Objective type)	No of questions	Duration (Minutes)	Maximum Marks
Part- A : General studies and mental ability	50	50	50
Part B. Sericulture	100	100	100
TOTAL			**150**

Note:- For each correct answer 1 mark will be awarded and each wrong answer will carry 0.25 negative mark.

SYLLABUS FOR EXIMANITION TO THE POST OF VILLAGE SERICULTURE ASSISTANT IN ANDHRA PRADESH SERICULTURE SUBORDINATE SERVICE PART-A

GENERAL STUDIES AND MENTAL ABILITY

1) General Mental ability and reasoning.
2) Quantitative aptitude including data interpretation.
3) General English.
4) Current affairs of regional, national and International importance.
5) General Science and its applications to the day to day life, Contemporary development in science and Technology and information Technology.
6) History & Culture of India with specific focus on AP.
7) Indian polity and governance: constitutional issues, 73/74th Amendments, public policy, reforms ad centre – state relations with specific reference to Andhra Pradesh.
8) Society, Social justice, rights issues.
9) Physical geography of Indian sub-continent and Andhra Pradesh.
10) Key welfare & development schemes of Government of Andhra Pradesh.

Part B: Sericulture

History of Sericulture – Introduction, History, Silk Road
Morphology and **Taxonomy of Mulberry-** Introduction, Distribution of Mulberry, Mulberry varieties **(G4)**, systematic position, morphology and Taxonomy of mulberry.
Non-mulberry food plants: Tasar, Eri, and Muga
Soils and Preparation of Land- Introduction, types of soils and properties,

Suitable soils for Mulberry, soil PH and reclamation, selection of land, land preparation, soil erosion, **Soil texture ,Soil humus, soil** moisture and conservation methods. **Mechanization in mulberry cultivation.**
Mulberry planting methods: Introduction - Introduction, selection of mulberry varieties, **Planting (Tree plantation) methods,** sexual and asexual propagation.
Mulberry Cultivation: Introduction, Cultural Practices, garden implements, weeds and inter-cultivation, pruning and training, importance of water shed, methods of irrigation, **detailed study of Drip irrigation.**
Manures & Fertilizers – Introduction, **organic manures**, types of fertilizers, application methods and schedules, **Detailed study of Vermi- compost.**
Nutritive values of Mulberry leaf - Introduction, Bye products of Mulberry, Medicinal and other use of mulberry, Contents of mulberry leaf.
Non- Mulberry Silk Worms – Introduction, Distribution, salient features of non-mulberry silkworms.
Rearing House – Introduction, Site selection and types of rearing houses.
Rearing Equipment – Introduction, Equipment and uses, **Mechanization for large scale Sericulture.**
Preparation for Rearing – Introduction, cleaning, preparation for disinfection, disinfectants and disinfection methods, maintenance of hygienic conditions during rearing and **record maintenance.**
Environmental Conditions and Management – Introduction, **Temperature, humidity, air, light, Management of environmental conditions and various devices used.**
Economics of Silkworm rearing – Introduction, equipment required for **300 DFL's shoot rearing and its economics, Economics of (CRC)Chawki Rearing Centres. By products of silkworm rearing and their utilization.**
Entrepreneurship Development (EDP):Introduction, Scope for Self employment in Sericulture and Govt. Schemes for financial assistance.
EDP in Sericulture: Introduction, EDP in Mulberry Nursery, CRC'S, Grainage and Silk reeling and few success stories in sericulture.
Hatching and Brushing – Introduction, incubation of eggs, blue egg and black boxing, hatching and hatching percentage, methods of brushing, **Methods of leaf harvesting, transportation and preservation**
Chawki Rearing – Introduction, Chawki rearing methods, quality of mulberry leaf,leaf selection, feeding schedules, bed cleaning, spacing, moulting, Artificial diet.
Late age Rearing – Introduction, late age rearing methods (shoot rearing), quality of mulberry leaf, leaf selection, feeding schedules, bed cleaning, spacing and moulting.
Spinning and Mounting – Introduction, ripening of worms, process of spinning, mounting, types of mountages, environmental conditions, care during mounting, cocoon harvesting, transport. Bye products of Rearing **and value addition**
Effective Rate of Rearing (E.R.R.) – Introduction, calculation of E.R.R. by weight, calculation of E.R.R. by number, calculation of **L.C.R.(Leaf Cocoon Ratio)**
Bivoltine Rearing Technology– Introduction, Modern concepts, bivoltine breeds/hybrids, rearing aspects and advantages of bivoltine Rearing.
Silkworm Anatomy – Introduction, Silk glands, digestive system, reproductive system of moths

Silkworm Diseases and Pest management –Introduction, protozoan, bacterial, viral, and fungal diseases and management. Major and minor pests and management. Integrated Disease and Pest Management (IDPM)
Seri Bio-Technology– Introduction, Basics of Plant and Silkworm Bio-Technology, Importance of breeding in Mulberry and Silkworm, Tissue culture. Sericulture Reasearch and Development Institutes in India.
Cytology and anatomy of mulberry – Introduction, Structure of cell, cell organelles Mitosis and meiosis Cell division, **Genetics, Mendal Laws**, Anatomy of leaf, stem and root
Farm Management- Introduction, Mulberry farming, raising saplings in nursery bed, Integrated weed management, labour management, farm records.
Mulberry Diseases – Introduction, Fungal, Bacterial, Viral diseases and Nutrient deficiency diseases and its control and remedial measures
Mulberry Pests – Introduction, Lepidopteron pests, Jassids, Thrips, Mites, Beetles, **Integrated Disease and Pest Management (IDPM)**
Estimation of Leaf Yield – Introduction, methods of estimation **in various plant spacing systems.**
Raising and maintenance of chawki garden-Introduction, importance and package of practices.
Economics of Mulberry cultivation – Introduction, **Economics of Nursery, Rain-fed cultivation, irrigated cultivation, vermi-compost** , Economics of 1 acre irrigated and rain-fed Mulberry
Systematic Position of *Bombyx mori* – Introduction, Systematic position and classification, types of Silkworms.
Morphology and life cycle of *Bombyx mori*– Introduction, study of life stages and cycle, sex differences in larva, pupa and moth, metamorphosis.
Parental Races – Introduction, Distribution, seed organization, races, Voltinism, moultinism, **breeds/hybrids in current use.**
Grainage Equipment – Introduction, Prerequisite of Grainage, Grainage model building, equipment and uses, disinfection, grainage registers /records.
Grainage Operations – Introduction, selection of seed races, procurement, transportation **and preservation of** seed cocoons, synchronization, moth emergence, sex separation, coupling and decoupling, ovi position.
Seed Production – Introduction, preparation of layings, Sheet eggs, loose eggs, mother moth examination, Surface sterilization, assessment of layings and incubation of eggs.
Acid treatment and hibernation schedules – Introduction, types of eggs, physical and chemical stimulants, types of acid treatment and **hibernation schedules** of eggs.
Seed Economics – Introduction, economics for 10 lakhs seed capacity
Silk Reeling Industry – Introduction, importance of reeling industry, scope and limitations.
Cocoon Quality and Cocoon Sorting – Introduction, physical and commercial characters, properties of silk, Principles for assessment, Tactile and Numerical Tests, Good cocoons, Defective cocoons, model problems, model problems.
Cocoon Marketing – Introduction, Rules and Acts, Price Fixation, model problems

Cocoon Stifling – Introduction, Stifling methods, storage of cocoons, ushnakoti, sorting of cocoons, de flossing, Riddling, mixing.
Cocoon cooking and Brushing – Introduction, Reeling water, cooking and methods of cooking, Brushing and methods of Brushing
Reeling-Introduction, Reeling apparatus and **Machines, Reeling water,** re-reeling , Silk Examination, Lacing and skeining, making of skeins , book making and baling, **Spun silk making** and Non-mulberry cocoon reeling.
Raw Silk Testing– Introduction, Testing Methods, Parameters, Standard Testing appliances, Conditioning of Raw silk, classification of Raw silk.
Reeling economics- Introduction, Economics of Charaka, cottage basin and **multi-end reeling machines,** reeling records and uses.
Silk Dyeing – Introduction, Types of Dyes, Degumming, methods of dyeing. Bye products of Reeling