



**SHANKAR  
IAS ACADEMY™**

Best Academy for Civil Services Exam Coaching

shankariasacademy.com

# Agriculture Optional

Test Series 2027



**R. KANAGARAJ**  
Faculty, Agriculture

Shankar IAS Academy  
Experience - 10 years,  
UPSC Interview - 5  
(IAS - 3 times & IFS - 2 times)

Batch Starts on:

**26<sup>th</sup> June**  
2026  
Friday

**2.30 pm**  
to **5.00 pm**

Orientation  
Session

“Bridge the Gap Between ‘Average’ & ‘Topper’ with Personalized Mentoring by Kanagaraj Sir”

- ✓ Proven UPSC Alignment
- ✓ Personal Mentoring by Kanagaraj Sir
- ✓ The 300+ Blue Print
- ✓ Precision Feed Back Loop
- ✓ Comprehensive Evaluation Cycle
- ✓ Gold Standard Resources
- ✓ Deep - Dive Answer Keys
- ✓ All India Benchmarking

**Shankar IAS Academy**

No 109, AL Block, 4th Avenue,  
Anna Nagar, Chennai - 600040



**9003190030**

# Some of Our Successful Candidates



AIR  
245

**Pranay Prasoon**  
(CSE 2025)



AIR  
291

**S Padmavathi**  
(CSE 2025)



AIR  
320

**P Vibisha**  
(CSE 2025)



AIR  
323

**Jagtap Mohini Ashok**  
(CSE 2025)



AIR  
448

**Sathiya priya C**  
(CSE 2025)



AIR  
510

**Anusuya M**  
(CSE 2025)



AIR  
692

**M K Muthu Kumar**  
(CSE 2025)



AIR  
781

**Praveenkumar K**  
(CSE 2025)



AIR  
24

**Nila Bharathi**  
(IFoS 2024)



AIR  
37

**Sumant**  
(IFoS 2024)



AIR  
69

**Lochan Bopanna**  
(IFoS 2024)



AIR  
88

**Bibisha**  
(IFoS 2024)



AIR  
125

**Saranya**  
(CSE 2024)



AIR  
192

**Apsara**  
(CSE 2024)



AIR  
304

**Pushparaj**  
(CSE 2024)



AIR  
407

**Hariprasath**  
(CSE 2024)



AIR  
546

**Kavinmozhi**  
(CSE 2024)



AIR  
726

**Mohanapourani**  
(CSE 2024)



AIR  
122

**Vinay Sunil Patil**  
(CSE 2023)



AIR  
560

**Shubam Pawar**  
(CSE 2023)



AIR  
573

**Devi Priya Ajith**  
(CSE 2022)



AIR  
689

**Ramakrishna Saran**  
(CSE 2022)



AIR  
42

**Swathi Sree T**  
(CSE 2021)



AIR  
20

**Rahul Gowda**  
(IFoS 2023)



AIR  
33

**Sowmya R A**  
(IFoS 2023)

More...

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**9003190030**

**AGRICULTURE (OPTIONAL)  
(BATCH II) TEST SCHEDULE  
(MAINS ASPIRANTS 2027)**



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## **AGRICULTURAL (BATCH II) TEST SCHEDULE 2027**

### **Features**

***"Bridge the gap between 'Average' and 'Topper' with personalized mentoring by Kanagaraj Sir."***

- **Proven UPSC Alignment:** Join the league where **75% of the questions** in CSE 2025 were directly reflected from our previous test series—minimizing surprises on exam day.
- **The 300+ Blueprint:** Access a meticulously engineered schedule designed with one singular goal: pushing your Optional score beyond the **300-mark barrier**.
- **Comprehensive Evaluation Cycle:** Master the syllabus through a structured **14-test** journey: **8 Sectional Tests** for micro-topic clarity, **2 – Revision Test** and **4 Full-Length Mocks** for exam-simulated stamina.
- **Personal Mentoring by Kanagaraj Sir:** Benefit from direct, one-on-one strategic guidance from India's leading expert to refine your approach and mindset.
- **Precision Feedback Loop:** Move beyond generic remarks with **One-on-One personalized feedback** sessions to identify and fix your specific answer-writing gaps.
- **Gold Standard Resources:** Study the **All India Highest Scorer's** answer copies to decode the DNA of a topper's presentation and content.
- **Deep-Dive Answer Keys:** Receive exhaustive, high-quality model answers that serve as a ready-reckoner for value addition and quick revision.
- **All-India Benchmarking:** Compete with a pan-India talent pool to understand exactly where you stand and what it takes to reach the top.
- **Fee – Rs.12,500 for New Students. Rs.9,500 for Old Students.**
- **Test batch orientation – 27.06.2026. Test starts from 03.07.2026**

**AGRICULTURAL TEST SCHEDULE 2027**

Test No	Date	Detailed Syllabus	Reference Books
1.	03.07.2026	<p><b>Ecology and Environment, Cropping System and Forestry</b></p> <ul style="list-style-type: none"> <li>▪ Ecology and its relevance to man, natural resources, their sustainable management and conservation.</li> <li>▪ Physical and social environment as factors of crop distribution and production.</li> <li>▪ Agro ecology; cropping pattern as indicators of environments.</li> <li>▪ Environmental pollution and associated hazards to crops, animals and humans.</li> <li>▪ Climate change—International conventions and global initiatives.</li> <li>▪ Greenhouse effect and global warming.</li> <li>▪ Advance tools for ecosystem analysis—Remote Sensing (RS) and Geographic Information Systems (GIS).</li> </ul> <p><b>Cropping System</b></p> <ul style="list-style-type: none"> <li>▪ Cropping patterns in different agro-climatic zones of the country.</li> <li>▪ Impact of high-yielding and short duration varieties on shifts in cropping patterns.</li> </ul>	<p><b>Agriculture Optional Material by R.Kanagaraj</b></p> <p>Or</p> <ul style="list-style-type: none"> <li>▪ Ecology and Environment - P.D.Sharma</li> <li>▪ NCERT – 12<sup>th</sup> Biology Chapter Ecology</li> <li>▪ Agritech portal by TNAU</li> </ul>



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Test No	Date	Detailed Syllabus	Reference Books
		<ul style="list-style-type: none"><li>▪ Concepts of various cropping, and farming systems.</li><li>▪ Organic and Precision farming.</li><li>▪ Package of practices for production of important cereals, pulses, oil seeds, fibres, sugar, commercial and fodder crops.</li></ul> <p><b>Forestry</b></p> <ul style="list-style-type: none"><li>▪ Important features and scope of various types of forestry plantations such as social forestry, agroforestry, and natural forests.</li><li>▪ Propagation of forest plants.</li><li>▪ Forest products. Agroforestry and value addition.</li><li>▪ Conservation of forest flora and fauna.</li></ul>	<ul style="list-style-type: none"><li>▪ Principles of Agronomy – Yellamandha Reddy</li></ul>
2.	17.07.2026	<p><b>Cell Biology, Genetics and Plant Biotechnology</b></p> <ul style="list-style-type: none"><li>▪ Cell structure, function and cell cycle.</li><li>▪ Synthesis, structure and function of genetic material.</li><li>▪ Laws of heredity.</li><li>▪ Chromosome structure, chromosomal aberrations.</li><li>▪ Linkage and cross-over, and their significance in recombination breeding.</li><li>▪ Polyploidy, euploids and aneuploids.</li></ul>	<p><b>Agriculture Optional Material by R.Kanagaraj</b></p> <p><b>Or</b></p> <ul style="list-style-type: none"><li>▪ Fundamentals of Genetics – B.D. Singh</li><li>▪ Plant Breeding Principles and Methods – B.D.Singh</li></ul>



Test No	Date	Detailed Syllabus	Reference Books
		<ul style="list-style-type: none"> <li>▪ Mutation and their role in crop improvement.</li> <li>▪ Heritability, sterility and incompatibility, classification and their application in crop improvement.</li> <li>▪ Cytoplasmic inheritance</li> <li>▪ Sex-linked, sex-influenced and sex-limited characters.</li> <li>▪ Role of genetic engineering and biotechnology in crop improvement</li> <li>Genetically modified crop plants.</li> </ul>	
3.	31.07.2026	<p><b>Weed Science and Irrigation Management</b></p> <ul style="list-style-type: none"> <li>▪ Weeds, their characteristics, dissemination and association with various crops; their multiplications;</li> <li>▪ Cultural, biological, and chemical control of weeds.</li> </ul> <p><b>Irrigation Management</b></p> <ul style="list-style-type: none"> <li>▪ Water-use efficiency in relation to crop production,</li> <li>▪ Criteria for scheduling irrigations,</li> <li>▪ Ways and means of reducing run-off losses of irrigation water.</li> <li>▪ Rainwater harvesting.</li> <li>▪ Drip and sprinkler irrigation.</li> </ul>	<p><b>Agriculture                      Optional</b> <b>Material by R.Kanagaraj</b></p> <p style="text-align: center;">Or</p> <ul style="list-style-type: none"> <li>▪ Agritech portal by TNAU</li> <li>▪ Principles of Agronomy – Yellamandha Reddy</li> <li>▪ ICAR – E-courses Agriculture website</li> </ul>



Test No	Date	Detailed Syllabus	Reference Books
		<ul style="list-style-type: none"> <li>▪ Drainage of water-logged soils,</li> <li>▪ Quality of irrigation water,</li> <li>▪ Effect of industrial effluents on soil and water pollution.</li> <li>▪ Irrigation projects in India.</li> </ul>	
4.	07.08.2026	<p><b>Revision Test I - Ecology and Environment, Cropping System and Forestry, Cell Biology, Genetics and Plant Biotechnology, Weed Science and Irrigation Management.</b></p>	
5.	21.08.2026	<p><b>Plant Breeding and Seed Technology</b></p> <ul style="list-style-type: none"> <li>▪ History of plant breeding.</li> <li>▪ Modes of reproduction,</li> <li>▪ Selfing and crossing techniques.</li> <li>▪ Origin, evolution and domestication of crop plants,</li> <li>▪ Centre of origin, law of homologous series,</li> <li>▪ Crop genetic resources - conservation and utilization.</li> <li>▪ Application of principles of plant breeding, improvement of crop plants.</li> <li>▪ Molecular markers and their application in plant improvement.</li> <li>▪ Pure-line selection, pedigree, mass and recurrent selections,</li> <li>▪ Combining ability, its significance in plant breeding.</li> </ul>	<p><b>Agriculture                      Optional Material by R.Kanagaraj</b></p> <p style="text-align: center;">Or</p> <ul style="list-style-type: none"> <li>▪ Fundamentals of Genetics – B.D. Singh</li> <li>▪ Plant Breeding Principles and Methods – B.D.Singh</li> <li>▪ Seed Technology – R.L.Agarwal</li> </ul>



Test No	Date	Detailed Syllabus	Reference Books
		<ul style="list-style-type: none"> <li>▪ Heterosis and its exploitation.</li> <li>▪ Somatic hybridization.</li> <li>▪ Breeding for disease and pest resistance.</li> <li>▪ Role of interspecific and intergeneric hybridization</li> </ul> <p><b>Seed Technology</b></p> <ul style="list-style-type: none"> <li>▪ Seed production and processing technologies.</li> <li>▪ Seed certification, Seed testing and storage.</li> <li>▪ DNA finger printing and seed registration.</li> <li>▪ Role of public and private sectors in seed production, and marketing.</li> <li>▪ Intellectual Property Rights (IPR) issues</li> <li>▪ WTO issues and its impact on Agriculture.</li> </ul>	
6.	04.09.2026	<p><b>Soil Science, Nutrient Management, Soil and Water Conservation and Dryland Agriculture</b></p> <ul style="list-style-type: none"> <li>▪ Soil—physical, chemical and biological properties.</li> <li>▪ Processes and factors of soil formation.</li> <li>▪ Soils of India.</li> <li>▪ Mineral and organic constituents of soils and their role in maintaining soil productivity</li> </ul> <p><b>Nutrient Management</b></p>	<p><b>Agriculture                      Optional</b> <b>Material by R.Kanagaraj</b> Or</p> <ul style="list-style-type: none"> <li>▪ Principles of Agronomy – Yellamandha Reddy</li> <li>▪ Introductory Soil Science – Dilip Kumar Das</li> </ul>



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		<ul style="list-style-type: none"><li>▪ Essential plant nutrients and other beneficial elements in soils and plants.</li><li>▪ Principles of soil fertility, soil testing and fertiliser recommendations.</li><li>▪ Integrated nutrient management</li><li>▪ Biofertilizers</li><li>▪ Losses of nitrogen in soil, nitrogen-use efficiency in submerged rice soils, nitrogen fixation in soils.</li><li>▪ Efficient phosphorus and potassium use.</li><li>▪ Problem soils and their reclamation.</li><li>▪ Soil factors affecting green house gas emission.</li></ul> <p><b>Soil and Water Conservation and Dryland Agriculture</b></p> <ul style="list-style-type: none"><li>▪ Soil conservation, integrated watershed management.</li><li>▪ Soil erosion and its management.</li><li>▪ Dry land agriculture and its problems.</li><li>▪ Technology for stabilising agriculture production in rainfed areas.</li></ul>	
7.	18.09.2026	<p><b>Plant Physiology and Horticulture</b></p> <ul style="list-style-type: none"><li>▪ Principles of Plant Physiology with reference to plant nutrition, absorption, translocation and metabolism of nutrients.</li></ul>	<p><b>Agriculture                      Optional</b> <b>Material by R.Kanagaraj</b> Or</p>



Test No	Date	Detailed Syllabus	Reference Books
		<ul style="list-style-type: none"><li>▪ Soil-water-plant relationship.</li><li>▪ Enzymes and plant pigments;</li><li>▪ Photosynthesis—modern concepts and factors affecting the process,</li><li>▪ Aerobic and anaerobic respiration;</li><li>▪ C3, C4 and CAM mechanisms.</li><li>▪ Carbohydrate, protein and fat metabolism.</li><li>▪ Growth and development; photoperiodism and vernalization.</li><li>▪ Plant growth substances and their role in crop production.</li><li>▪ Physiology of seed development and germination; dormancy.</li><li>▪ Stress physiology—drought, salt and water stress.</li></ul> <p><b>Horticulture</b></p> <ul style="list-style-type: none"><li>▪ Major fruits, plantation crops, vegetables, spices and flower crops.</li><li>▪ Package practices of major horticultural crops.</li><li>▪ Protected cultivation and high tech horticulture.</li><li>▪ Post-harvest technology and value addition of fruits and vegetables.</li><li>▪ Landscaping and commercial floriculture.</li><li>▪ Medicinal and aromatic plants.</li><li>▪ Role of fruits and vegetables in human nutrition.</li></ul>	Fundamentals of Plant Physiology – V.K.Jain Hand book of Horticulture - ICAR



Test No	Date	Detailed Syllabus	Reference Books
8.	25.09.2026	<p><b>Revision Test II - Plant Breeding and Seed Technology, Soil Science, Nutrient Management, Soil and Water Conservation and Dryland Agriculture, Plant Physiology and Horticulture.</b></p>	
9.	09.10.2026	<p><b>Farm Management, Agricultural Economy and Agricultural Extension</b></p> <ul style="list-style-type: none"> <li>▪ Farm management, scope, importance and characteristics,</li> <li>▪ Farm planning. Optimum resource use and budgeting.</li> <li>▪ Economics of different types of farming systems.</li> <li>▪ Marketing management strategies for development,</li> <li>▪ Market intelligence.</li> <li>▪ Price fluctuations and their cost;</li> <li>▪ Role of co-operatives in agricultural economy;</li> <li>▪ Types and systems of farming and factors affecting them.</li> <li>▪ Agricultural price policy.</li> <li>▪ Crop Insurance.</li> </ul> <p><b>Agricultural Extension</b></p> <ul style="list-style-type: none"> <li>▪ Agricultural extension, its importance and role,</li> <li>▪ Methods of evaluation of extension programmes,</li> <li>▪ Socio-economic survey and status of big, small and marginal farmers and landless agricultural labourers;</li> </ul>	<p><b>Agriculture Optional Material by R.Kanagaraj</b></p> <p style="text-align: center;">Or</p> <ul style="list-style-type: none"> <li>• Economics of Farm Production and Management – VT Raju</li> <li>• Hand Book of Agricultural Extension – ICAR</li> <li>• ICAR – E-courses Agriculture website</li> </ul>



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Test No	Date	Detailed Syllabus	Reference Books
		<ul style="list-style-type: none"> <li>▪ Training programmes for extension workers.</li> <li>▪ Role of Krishi Vigyan Kendra's (KVK) in dissemination of Agricultural technologies.</li> <li>▪ Non-Government Organisation (NGO) and self-help group approach for rural development.</li> </ul>	
10.	23.10.2026	<p><b>Entomology, Pathology, Food Production, Food Security and Nutrition</b></p> <ul style="list-style-type: none"> <li>▪ Diagnosis of pests and diseases of field crops, vegetables, orchard and plantation crops and their economic importance.</li> <li>▪ Classification of pests and diseases and their management.</li> <li>▪ Integrated pest and diseases management.</li> <li>▪ Storage pests and their management.</li> <li>▪ Biological control of pests and diseases.</li> <li>▪ Epidemiology and forecasting of major crop pests and diseases.</li> <li>▪ Plant quarantine measures.</li> <li>▪ Pesticides, their formulation and modes of action.</li> </ul> <p><b>Food Security</b></p> <p>Food production and consumption trends in India. Food security and growing population – vision 2020. Reasons for grain surplus. National and international food policies. Production, procurement, distribution constraints. Availability of food grains, per capita expenditure on food.</p>	<p><b>Agriculture                      Optional</b> <b>Material by R.Kanagaraj</b></p> <p style="text-align: center;">Or</p> <ul style="list-style-type: none"> <li>• Plant Pathology – R.S.Mehrotra</li> <li>• Elements of Economic Entomology – Vasantharaj David</li> <li>• ICAR – E-courses Agriculture website</li> <li>• Agritech Portal by TNAU</li> </ul>



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Test No	Date	Detailed Syllabus	Reference Books
		Trends in poverty, Public Distribution System and Below Poverty Line population, Targeted Public Distribution System (PDS), policy implementation in context to globalization. Processing constraints. Relation of food production to National Dietary Guidelines and food consumption pattern. Food based dietary approaches to eliminate hunger. Nutrient deficiency – Micronutrient deficiency: Protein Energy Malnutrition or Protein Calorie Malnutrition (PEM or PCM), Micro nutrient deficiency and HRD in context of work capacity of women and children. Food grain productivity and food security.	
11.	30.10.2026	<b>Full Mock Test-I – Paper I</b>	
12.	10.11.2026	<b>Full Mock Test-I – Paper II</b>	
13.	20.11.2026	<b>Full Mock Test-II Fore Noon - Paper I After Noon – Paper II</b>	