

Agriculture Science and Technology

Practical syllabus std - XI

Practicals

1. Identification of rocks and minerals.
2. Study of soil profile. Collection and preparation of soil sample for analysis.
3. Study of meteorological equipments.
4. Study of important measurement units used in agriculture and their conversion.
5. Identification of seed and plant parts.
6. Calculation of seed rate, plant population,
7. Study of seed treatments and practicing different methods of sowing
8. Calculation of pure living seed percentage and physical purity percentage of seed.
9. Identification of manures and fertilizers and calculation of their quantity as per the recommendations.
10. Calculation of duty and delta of irrigation.
11. Erection and maintenance of drip and sprinkler irrigation systems.
12. Estimation of cost of fitting drip irrigation system for unit area.
13. Identifying and handling of different tillage implements and garden tools.
14. Practice of seed bed preparation.
15. Identification of different types of weeds and study of their control methods.
16. Study of major pest and diseases and their control measures.
17. Layout preparation for fruit orchard and preparation of pits for plantation.
18. Practicing training, pruning and other horticultural operations.
19. Study of design and construction of farm pond.

Visits

At least four visits from the following list should be conducted.

Separate section of visit report should be kept in the journal.

1. Visit to soil testing laboratory.
2. Visit to meteorological observatory.
3. Visit to seed farm / seed plot.
4. Visit to fertilizer factory.
5. Visit to bio-gas plant/vermicompost unit.
6. Visit to farmers producer company/multi purpose co-operative society.
7. Visit to farm for observing drip and sprinkler irrigation unit.
8. Visit to fruit orchard to observe different horticultural operations.

Project work

Complete any one of the following projects.

1. Collection of weeds and preparation of weed album.
2. Collection of insects and preparation of insect box.
3. Collection of organic and inorganic fertilizers.
4. Collection of seed samples and preparation of herbarium.

Agriculture Science and Technology
Specimen question paper (Practical) std - XI

Marks

Q. 1) Identification

6

- A) Identify
- B) Subquestion

Note : In all 6 Specimens should be kept, each carrying 1 mark ($\frac{1}{2}$ mark for identification and $\frac{1}{2}$ mark for correct answer of subquestion)

Q. 2) Solve any two of the following.

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- A) Mathematical problem from practical syllabus (viz. seedrate / plant population / physical purity / pure living seed).
- B) Mathematical problem from practical syllabus (viz. quantity of fertilizers / duty and delta of irrigation / conversion of measurement unit from one system to another system).
- C) Theoretical question from practical syllabus.

Q. 3) Practical exercise (any one)

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- A) Seed treatment
- B) Seed bed preparation
- C) Method of sowing
- D) Practice of training or pruning or any other horticultural operations.
- E) Collection and preparation of soil sample for analysis
- F) Tying and handling of tillage implements

Q. 4) A) Viva-voce - 02

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B) Journal - 04

Q. 5) Project or visit report

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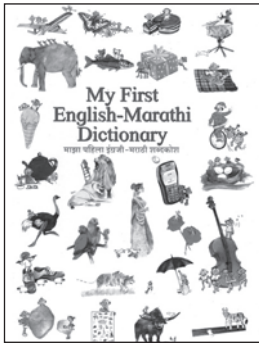
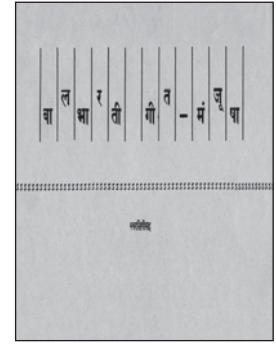
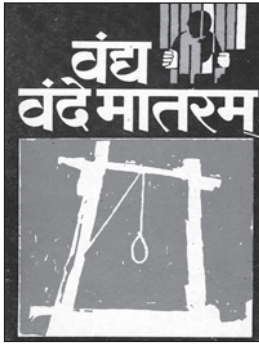
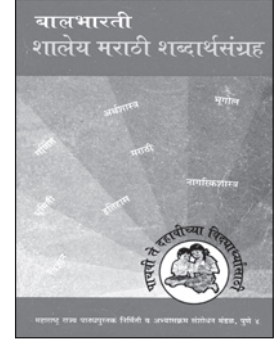
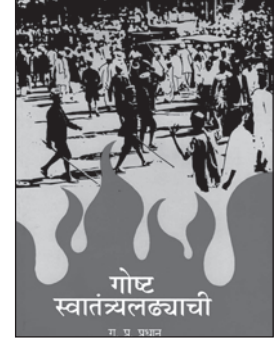
Any one report on project or the visit actually given by the student during the academic year.

List of Reference Books

1. Introduction to Agronomy and Soil and Water Management- Dr. V. G. Vidya, K. R. Shasrabuddhe, Continental Prakashan, Pune - 411 030.
2. Crop Production and Field Experimentation - Dr. V. G. Vaidya, K. R. Sahasrabuddhe, Dr. V. S. Khuspe. Continental Prakashan, Pune - 411 030.
3. Agronomy - S. C. Panda - 2008, Agrobios (India) Jodhpur - 342 002.
4. Principles of Agronomy - J. Yellamanda Reddy, G. H. Sankara Reddy - Kalyani Publishers, Revised Edition 2002.
5. Principles of Crop Production - 2000 S. R. Reddy, Kalyani Publishers, Ludhiyana.
6. Hand Book of Agriculture - Fifth edition (2006) I. C. A. R., New Delhi.
7. Principles of Agriculture - 2009, Ashok S. Jadhav, Sandip K. Raskar, Raj laxmi Prakashan.
8. Plant Breeding - Principles and Methods - 2005, B. D. Singh, Kalyani Publishers.
9. Agronomy of Field Crops - 2006. S. R. Reddy, Kalyani Publishers, Ludhiyana.
10. Seed Technology, 2002, Ratan Lal Agrawal, Oxford and IBH Publishing Co-op. Pvt. Ltd., Kolkata.
11. Seed Technology - Dr. Harpal Singh, Tomar, Aman Publishing House, Meerut.
12. Plant Tissue Culture - M. K. Rajdan.
13. Plant Tissue Culture - M. K. Singh, Oxford and IBH Publishing Co. Pvt. Ltd. 2004.
14. Seed Science and Technology - A. K. Joshi, B. D. Singh, Kalyani Publishers.
15. Principles of Agronomy, 2011, - S. R. Reddy, Kalyani Publishers.
16. Fundamentals of of Agronomy, 2008, - Dr. Gopal Chandra De, Oxford and IBH Publishing Company Pvt. Ltd.
17. Seed Science and Technology, 2001 - Subir Sen, Nabinananda Ghosh, Kalyani Publishers.
18. Text Book of Soil Science - A Textbook - V. D. Patil, C. V. Mali, Phoneix Publications Parbhani.
19. Fundamentals of Soil Science, 1996 - Dr. J. A. Daji, Revised by Dr. J. R. Kadam, N. D. Patil, Media Promoters and Publisher Pvt. Ltd., Mumbai.
20. Handbook of Horticulture -, 2002, I. C. A. R., New Delhi.
21. Munures and Fertilizers - K. S. Yawalar, J. P. Agarwal, S. Bokde, Agri-Horticultural Publishing House, Nagpur.
22. Commercial Production of Horticultural Crops - H. N. Samaddar, Naya Udyog, Kokata.
23. Basic Horticulture - Jitendra Singh, Kalyani Publishers, Ludhiyana.
24. Vegetable Crops - T. K. Bose, K. Kabir et. al., Naya Prokash, Kolkata.
25. Introductory Ornamental Horticulture - J. S. Arora, Kalyani Publishers.
26. A Class Book of Botany - A. C. Datta, Oxford Publication.
27. Waste Management and Environment V. PDPO, H. Ltob, U. Mander.
28. Environment Waste Management, Ramchandra, Oxford Publication
29. Advances in Waste Management, - Ajay S. Kalasdhad, Jawan Singh, KondusamyDhamodharan, Springer, WIF Press.
30. Handbook on Waste Management, Thomas C., Kinnaman and Kenji Takeychi.
31. Agriculture Science and Technology, Std XI and Std XII, 2018, Maharashtra State Board Secondary and Higher Secondary Education, Pune.
32. Textbook of Crop Production Std-XI and Std-XII - Maharashtra State Board of Secondary and Higher Secondary Education, Pune.

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- पाठ्यपुस्तक मंडळाची वैशिष्ट्यपूर्ण पाठ्येत्तर प्रकाशने.
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