

Rayat Shikshan Sanstha's,
Dr. Patangrao Kadam Mahavidyalaya, Ramanandnagar (Burli).
Tal- Palus, Dist- Sangli, 416308

DEPARTMENT OF BOTANY

Value Added Course in
HORTICULTURE TECHNOLOGY
2020-21

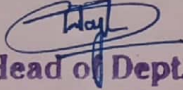
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Department of Botany

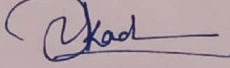
Notice

Date: 13/02/2021

All the students of B.Sc. II (Botany) are hereby informed that your theory and practical lectures of **Value Added Course in 'Horticulture Technology'** as per time-table are going to start from 15/02/2021. It is compulsory to all who have enrolled for this course to attend the theory and practical lectures and put your attendance.


Head of Dept.
Department of Botany
Dr. Patangrao Kadam Mahavidhyalaya,
Ramanandnagar (Burli)




Principal,
Dr. Patangrao Kadam Mahavidhyalaya,
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Department of Botany


Value Added Course in
Horticulture Technology 2020-21

List of Students

| Sr. No. | Name of Student |
|---------|--|
| 1. | CHOUGULE NAMRATA SUNIL |
| 2. | DESHMUKH SANJIVANI BHASKAR |
| 3. | GURAV VAISHNAVI DADASO |
| 4. | JADHAV KAJAL SUNIL |
| 5. | JADHAV MAITHILI SATISH |
| 6. | KAMBLE KIRAN DEVANAND |
| 7. | KHILARE RUTUJA PRAKASH |
| 8. | KOLI MAHESHVARI MADHUKAR |
| 9. | LAD PRATIK RAJENDRA |
| 10. | LAD SOURABH HANMANT |
| | Male-02 Female-08 |


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VALUE ADDED COURSE IN
HORTICULTURE TECHNOLOGY
SYLLABUS

1. Introduction (2L)
(i) Definition, (ii) Scope and importance (iii) Export potential
2. Branches of horticulture (2L)
Definition and description of the following branches:-
i) Pomoculture (ii) Olericulture (iii) Floriculture (iv) Ornamental and landscape gardening
(v) Preservation of Fruits and Vegetables.
3. Propagation of Horticultural plants: (12L)
i) Sexual (Seed) Propagation: Merits and demerits, Selection of seeds, Pre-germination treatment. Sowing of seeds. Transplanting of seedling.
ii) Asexual (Vegetative) Propagation:
a) Natural: Runner, Corm, Suckers, Bulb, Tubers, Bulbils, Stolon, Offset.
b) Artificial Propagation: Merits and demerits
Cutting: Definition, Advantages and disadvantages. Types: i) Stem cutting – Herbaceous, Semi-hard wood, hard-wood and soft-wood.
ii) Root cutting iii) Leaf cutting iv) Leaf bud cutting
Layering: Definition, Advantages, Factors affecting for root formation, Special treatment for root formation Types: i) Simple ii) Tip iii) Serpentine iv) Trench v) Mound
vi) Air layering and Gooty
Grafting: Definition, Advantages, Limitation stock, Scion incompatibility, Root stock – Scion relationship, Raising of root stocks, Selection scion.
Types of Grafting: i) Whip ii) Tongue iii) Side iv) Approach v) Stone.
Budding: Types: i) 'T' or shield budding, ii) Patch budding
4. Training and Pruning (3L)
Definition, difference, Objectives, Advantages
Methods of Training: 1) Central leader system 2) Open centre system 3) Modified leader
Methods of pruning: 1) Heading back 2) Thinning out
5. Special horticultural practices: (2L)
a) Ringing b) Girdling c) Notching d) Bending e) Root pruning and Exposure
6. Bahar treatment: (3L)
Definition and Types: a) Ambia bahar b) Mrig bahar c) Hasta bahar
Steps in Bahar treatment:- a) Withholding of water b) Cultivation of land c) Manuring
d) Resumption of watering e) Choice of bahar
7. Commercial varieties and cultivation Practices of Grape, Tomato and Rose. (14L)
With reference to climate, soil, planting, intercultural operations, manures and fertilizers, irrigation, pest and diseases and their control; Harvesting, yield and Marketing, uses and by products.
7. General Principles, methods of fruits and vegetables preservations. (2L)
Introduction, principles of preservations, methods of preservations of fruits and vegetables, temporary preservation and permanent preservation, fermentation, canning and bottling.

Head of Department

Dr. P. S. Patangrao Kadam Mahavidhyalaya,
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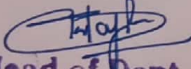
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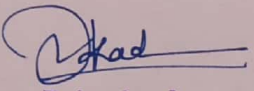
Course-Horticulture Technology 2020-21

Time Table

| Period Number | Time | Day | | |
|---------------|----------------------|---------|-----------|----------|
| | | Tuesday | Wednesday | Saturday |
| 1. | 10:10 am to 11:00 am | SWW | SWW | SWW |
| 2. | 4:00 pm to 5:30 pm | SWW | SWW | SWW |


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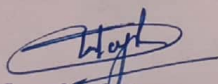
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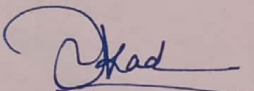
**Value Added Course in
Horticulture Technology 2020-21**

Programme Outcomes

1. Demonstrate a working knowledge and appreciation of the diversity of plants, their culture and utilization.
2. Apply horticultural principles to the successful growth and production of horticultural plants.
3. Demonstrate the knowledge, skills and attributes to be successful contributing members of the horticulture profession.
4. Quantify economic importance of plants in managed ecosystems and the impact of horticultural crops in food systems


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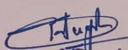
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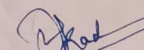
Value Added Course in
Horticulture Technology 2020-21

Attendance

| Sr. No. | Name of Student | 16/02/2021 | 17/02/2021 | 20/02/2021 | 23/02/2021 | 24/02/2021 | 27/02/2021 | 02/03/2021 | 03/03/2021 | 06/03/2021 | 09/03/2021 | 10/03/2021 | 13/03/2021 | 16/03/2021 | 17/03/2021 | 20/03/2021 | 23/03/2021 | 24/03/2021 | 27/03/2021 | 30/03/2021 | 31/03/2021 | 03/04/2021 | 06/04/2021 | 07/04/2021 | 10/04/2021 | 17/04/2021 |
|---------|----------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 1. | CHOUGULE NAMRATA SUNIL | P | P | P | P | P | A | P | P | P | P | P | P | P | P | P | P | A | A | P | A | P | P | P | P | P |
| 2. | DESHMUKH SANJIVANI BHASKAR | P | P | P | P | P | P | A | P | P | P | P | A | A | P | P | A | P | A | P | P | P | P | P | A | A |
| 3. | GURAV VAISHNAVI DADASO | P | P | A | P | P | P | P | A | A | A | P | P | P | A | A | P | A | P | A | P | A | A | P | P | A |
| 4. | JADHAV KAJAL SUNIL | P | P | A | P | P | P | P | P | P | P | P | A | P | A | A | P | A | P | P | P | P | P | P | P | A |
| 5. | JADHAV MAITHILI SATISH | A | P | P | A | P | P | P | P | P | P | P | A | P | P | P | A | A | P | P | P | P | A | P | P | A |
| 6. | KAMBLE KIRAN DEVANAND | A | P | P | P | A | P | P | P | A | P | P | P | P | P | P | P | P | A | P | A | P | P | P | A | P |
| 7. | KHILARE RUTUJA PRAKASH | P | A | A | P | A | P | P | A | A | P | A | A | P | A | A | A | P | A | P | P | P | P | P | A | P |
| 8. | KOLI MAHESHWARI MADHUKAR | P | A | P | P | P | P | A | P | P | P | A | P | P | P | P | A | P | P | P | P | P | P | A | P | P |
| 9. | LAD PRATIK RAJENDRA | P | P | P | A | P | P | A | P | P | A | P | A | P | P | P | P | P | P | P | P | P | A | P | P | P |
| 10. | LAD SOURABH HANMANT | P | P | P | A | P | P | P | P | P | P | P | P | P | A | A | A | A | P | P | P | P | A | P | P | A |


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Department of Botany
Value Added Course In
Horticulture Technology: 2020-21
Question Paper

Solve the following multiple choice questions.

1. Which chemical is used for de-greening of fruit?

- (A) IBA (B) Cytokinin
(C) Gibberalic Acid (D) Ethylene

2. Journal "Indian Horticulture" is published by _____

- (A) IIHR (B) IARI
(C) ICAR (D) IGKV

3. Most abundant and basic Auxin is _____

- (A) IAA (B) NAA
(C) IBA (D) 2-4 D

4. Disease free plants in micro propagation can be obtained through _____

- (A) Meristem culture (B) Anther culture
(C) Embryo culture (D) Cell culture

5. Germination of seed while it still remains attached with the parent source

- (A) Ovipary (B) Apomixis
(C) Vivipary (D) Asepsis

6. "Queen of Fruits" is called _____

- (A) Avocado (B) Mango
(C) Mangosteen (D) Ber

7. "King of Fruits" is called _____

- (A) Mango (B) Guava
(C) Apple (D) Citrus

8. The following is not a plant growth regulator

- A) Acetic acid B) Auxins
C) Gibberellins D) Ethylene

9. The pH in soils can be raised by adding:

- A) Sand B) lime
C) sulphur D) nitrogen

10. Onion and garlic are examples of

- A) Rhizome B) corm
- C) stem tuber D) bulb

11. Disadvantages of natural vegetative propagation includes

- A) lack of dispersal mechanisms B) no fertilization is involved
- C) area is quickly colonized D) daughter plants can grow quickly

12. External agencies are not required in

- A) natural vegetative propagation B) sexual reproduction
- C) bisexual reproduction D) trisexual reproduction

13. Example of natural vegetative propagation does not include

- A) Corals B) bulbs
- C) corms D) rhizomes

14. Advantages of Artificial Methods of Vegetative Reproduction include

- A) Crops with better quality B) Crops with more yield
- C) Ability to produce plants with desirable qualities D) All of these

15. The desired varieties of economically useful crops are raised by

- A) Vernalization B) Mutation
- C) Natural selection D) hybridization

16. Main function of biofertilizer is

- A) To increase chemical process B) To increase physiological process
- C) To increase biological process D) To increase photosynthesis process

17. Spraying of DDT produces pollution of

- A) Air B) Air and Water
- C) Air and Soil D) Air, Water and Soil.

18. Horticulture is the study that includes

- A) Fruits, vegetables and flowers B) All food crops
- C) Vegetable gardens and lawns near hotels only D) Some bush crops and apples

19. Aims of plant breeding are to produce

- A) Disease-free varieties B) High-yielding varieties
- C) Early-maturing varieties D) all of the above

20. The main function of NABARD is

- A) Farmers' loaning
- B) Agricultural research
- C) Refinancing to agricultural financing institutions
- D) Development of agriculture

21. Propagation of onion is done by

- A) Suckers B) Cuttings
C) Division D) Separation

22. Yellowing of lawn grass indicates deficiency of which nutrients

- A) Nitrogen B) Phosphorous
C) Potassium D) Oxygen

23. Fruit most suited for jelly making

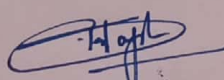
- (A) Mango (B) Banana
(C) Guava (D) Citrus

24. Modified stem of banana is _____

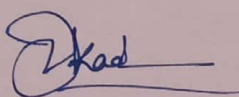
- (A) Sword suckers (B) Rhizomes
(C) Water suckers (D) Corm

25. Which of the following is dwarf variety of mango

- (A) Amarpali (B) Alphonso
(C) Dashehari (D) Langra


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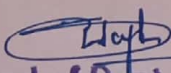
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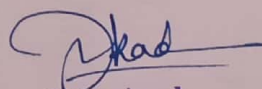
Value Added Course in
Horticulture Technology 2020-21

Markslist

| Sr. No. | Name of Student | Marks (Out of 50) |
|---------|----------------------------|-------------------|
| 1. | CHOUGULE NAMRATA SUNIL | 40 |
| 2. | DESHMUKH SANJIVANI BHASKAR | 36 |
| 3. | GURAV VAISHNAVI DADASO | 38 |
| 4. | JADHAV KAJAL SUNIL | 40 |
| 5. | JADHAV MAITHILI SATISH | 36 |
| 6. | KAMBLE KIRAN DEVANAND | 40 |
| 7. | KHILARE RUTUJA PRAKASH | 38 |
| 8. | KOLI MAHESHVARI MADHUKAR | 42 |
| 9. | LAD PRATIK RAJENDRA | 42 |
| 10. | LAD SOURABH HANMANT | 44 |


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NAAC Accreditation 'A' Grade CGPA 3.02

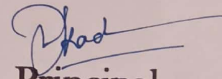
Affiliated to Shivaji University, Kolhapur

CERTIFICATE

This is to certify that Mr./Miss. _____ of B.Sc. II,
Dr. Patangrao Kadam Mahavidyalaya Ramanandnagar (Burli), has successfully
completed Value Added Course in 'Horticulture Technology' run by Department
of Botany (from 15 /02 /2021 to 20 /04 /2021) for the academic year 2020-21.


Course Coordinator




Principal

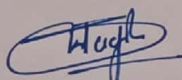
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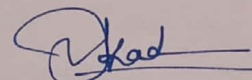
Value Added Course in Horticulture Technology

Annual Report 2020-21

Department of Botany is consistently engaged in running Value Added Course in Horticulture Technology. For the said course there were total 10 students from B.Sc. Part II have enrolled. With the help of knowledge acquired from this course, students will be able to plant their own small nursery.



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