

SRI VENKATESWARA UNIVERSITY : TIRUPATI

B.VOC. DEGREE COURSE IN HORTICULTURE

Under CBCS W.E.F. 2020-21

COURSE STRUCTURE

SEMESTER – I

Sl. No	Skill/ Gen. Edu	Courses	Title of the Paper/Course and code	Credits per course	Hours/ week	Total Hours/ Course	Marks		
							Internal	External	Total
1	General Education component Gen.Edu	Language	General English	3	4	60	25	75	100
2		Life skills	Human Values and Professional Ethics	2	2	30	-	50	50
3		Skill Dev. Course	Fundamentals of Microbes and Non Vascular Plants (1-3 Units)	2	2	30	-	50	50
4			Plant Nursery	2	2	30		50	50
5	Domain Skill component	Core-I	Principles of Horticulture Crops	4	4	60	25	75	100
6		Practical-I	Principles of Horticulture Crops	2	2	30	-	50	50
7		Core-II	Fundamentals of Plant Physiology	4	4	60	25	75	100
8		Practical-II	Fundamentals of Plant Physiology	2	2	30	-	50	50
9		Core-III	Floriculture Management and Plant Pathology	4	4	60	25	75	100
		Practical III	Floriculture Management and Plant Pathology	2	2	30	-	50	50
10		Industrial Internship	Industrial Training for 30 days	3	36	144	-	50	50
Total Credits				30	Total Marks				750

23/2/21

P.R. 23/2/21


SRI VENKATESWARA UNIVERSITY :: TIRUPATI
B.A. / B.Com. / B.Sc. / B.Voc. DEGREE COURSES

GENERAL ENGLISH
FIRST YEAR - FIRST SEMESTER
Under CBCS W.E.F. 2020-21

COURSE - 1 : ENGLISH PRAXIS
A COURSE IN COMMUNICATION AND SOFT SKILLS

- I. UNIT: Listening Skills**
 - i. Importance of Listening
 - ii. Types of Listening
 - iii. Barriers to Listening
 - iv. Effective Listening
- II. UNIT: Speaking Skills**
 - a. Sounds of English: Vowels and Consonants
 - b. Word Accent
 - c. Intonation
- III. UNIT: Grammar**
 - a) Concord
 - b) Modals
 - c) Tenses (Present/Past/Future)
 - d) Articles
 - e) Prepositions
 - f) Question Tags
 - g) Sentence Transformation (Voice, Reported Speech & Degrees of Comparison)
 - h) Error Correction
- IV. UNIT: Writing**
 - i. Punctuation
 - ii. Spelling
 - iii. Paragraph Writing
- V. UNIT: Soft Skills**
 - a. SWOC
 - b. Attitude
 - c. Emotional Intelligence
 - d. Telephone Etiquette
 - e. Interpersonal Skills

Approved by BOS (PASS)
w.e.f. 2020-2021


Chairperson 3/9/2020
BOS in English
(PASS)

**SRI VENKATESWARA UNIVERSITY B.A. / B.Com. /
B.A. / B.Com. / B.Sc. / B.VOC. DEGREE COURSES
GENERAL ENGLISH
FIRST YEAR - FIRST SEMESTER
Under CBCS W.E.F. 2020-21
ENGLISH PRAXIS COURSE-1**

**A COURSE IN COMMUNICATION AND SOFT SKILLS
MODEL QUESTION PAPER**

Time: 3 hours

Max Marks: 75

1. Answer any THREE of the following questions (3X5=15)
 - a) What is the importance of Listening?
 - b) Write a note on the types of Listening?
 - c) What are the barriers to listening?
 - d) Explain the strategies for effective listening.
 - e) Describe the traits of a good listener.

2. Answer any TWO of the following questions (2X5=10)
 - a. Write about consonant sounds with examples.
 - b. Explain Word Accent
 - c. What are the different kinds of intonation?
 - d. Mark the stress of the following words.
i) itself ii) alone iii) wonderful iv) pronunciation v) Electricity

3. Attempt the following questions: (2X1=2)
 - a. Concord
(i) Each of the cars_____ very well designed by the company.
(ii) The average worker's earnings_____ gone up dramatically
 - b. Fill in the blanks with suitable Modals: (2X1=2)
(i) Do we_____ to take our certificates for the Interview?
(ii) You_____ get an easy question paper this time.
 - c. Fill in the blanks with appropriate forms of the Verbs given in brackets. (5X1=5)
(i) Satya_____ (come) to college regularly.
(ii) When the police came, the thief_____ (escape)
(iii) The President_____ (address) the public tomorrow
(iv) I_____ (live) in a pent house for the last six months.
(iv) Aishu_____ (go) to school now.
 - d. Fill in the blanks with suitable Articles: (2x1=2)
(i) I met_____ European last month
(ii) _____ poor need our support.
 - e. Fill in the blanks with suitable prepositions (2x1=2)
(i) The patient is suffering_____ fever
(ii) The sweets are distributed_____ children.
 - f. Add Question Tags to the following statements (2x1=2)
(i) Sita is not writing_____?
(ii) I am late, _____?
 - g. Transform the following sentences as directed. (5x1=5)

- (i) The officer ordered the soldiers to open fire(change it into Direct speech)
- (ii) Akbar is one of the greatest kings(change it into positive degree)
- (iii) Bhavanasays,"I write a novel"(change it into Indirect speech)
- (iv) Jim Corbett had killed many tigers(Change it into passive voice)
- (iv) Mary is as clever as Lily. (Change it into Comparative degree).

h. Correct the following sentences (5x1=5)

- (i) could you return back the library cards to me, please
- (ii) The painting is too beautiful.
- (iii) Ram camped besides the lake.
- (iv) I have read the book yesterday.
- (v) The news are very pathetic.

4. Answer any TWO of the following questions. (2x5=10)

i. Punctuate the following

The dog grinned sardonically down on him over the edge for a moment as if he thought it would be a good lark to drop the cartridge down on jim.

ii. Pick out the correct word:

- | | | | |
|-------------------|----------------|----------------|-----------------|
| a) A. company | B. Compony | C. Kompony | D. Komphony |
| b) A. Techanology | B. Technalogy | C. Tachnology | D. Technology |
| c) A. achievement | B. acheivement | C. acheevement | D. achieevement |
| d) A. psychology | B. Psychologi | C. acheevement | D. achieevement |
| e) A. Occassion | B. occasion | C. Occaassion | D. occasion |

iii. Write a meaningful paragraph using the hints given below and suggest a suitable title
Reading hobby---good and bad books---of the hour and forever---books as best companions--- they entertain, educate and enlighten---make one forget one's loneliness.


iv) Expand any one of the following idea:

- a) A stitch in time saves nine
- b) Rome was not built in a day.

5. Answer any THREE of the following questions: (3x5=15)

- a. What are the benefits of 'SWOC' analysis?
- b. Explain the importance of positive attitude. How can we develop it?
- c. Describe the qualities needed to develop emotional intelligence
- d. What is Telephone Etiquette? Explain
- e. How do you demonstrate good interpersonal skills?

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(Dr M.SREELATHA),
Chairman,
BOS in English(PASS).

SRI VENKATESWARA UNIVERSITY : : TIRUPATI
B.A. / B.Com. / B.Sc. / B.Voc. DEGREE COURSE
FIRST YEAR - FIRST SEMESTER
Life Skill Course - HUMAN VALUES AND PROFESSIONAL ETHICS (HYPE)
Under CBCS W.E.F. 2020-21

Learning Outcome:

On completion of this course, the UG students will be able to

- ✓ Understand the significance of value inputs in a classroom and start applying them in their life and profession
- ✓ Distinguish between values and skills, happiness and accumulation of physical facilities, the Self and the Body, Intention and Competence of an individual, etc.
- ✓ Understand the value of harmonious relationship based on trust and respect in their life and profession
- ✓ Understand the role of a human being in ensuring harmony in society and nature.
- ✓ Distinguish between ethical and unethical practices, and start working out the strategy to actualize a harmonious environment wherever they work.

UNIT: 1 Introduction – Definition, Importance, Process & Classifications of Value Education

- ❖ Understanding the need, basic guidelines, content and process for Value Education
- ❖ Understanding the thought provoking issues: need for Values in our daily life
- ❖ Choices making – Choosing, Cherishing & Acting
- ❖ Classification of Value Education: understanding Personal Values, Social Values, Moral Values & Spiritual Values.

UNIT: 2 Harmony in the Family – Understanding Values in Human Relationships

- ✓ Understanding harmony in the Family- the basic unit of human interaction
- ✓ Understanding the set of proposals to verify the Harmony in the Family:
- ✓ Trust (*Vishwas*) and Respect (*Samman*) as the foundational values of relationship
- ✓ Present Scenario: Differentiation (Disrespect) in relationships on the basis of body, physical facilities, or beliefs.
- ✓ Understanding the Problems faced due to differentiation in Relationships
- ✓ Understanding the harmony in the society (society being an extension of family): *Samadhan*, *Samridhi*, *Abhaya*, *Sah-ashtya* as comprehensive Human Goals
- ✓ Visualizing a universal harmonious order in society- Undivided Society (*AkhindSamaj*), Universal Order (*SarvabhaumVyaswasthu*)- from family to world family.

UNIT: 3 Professional Ethics in Education

- ✓ Understanding about Professional Integrity, Respect & Equality, Privacy, Building Trusting Relationships.
- ✓ Understanding the concepts: Positive co-operation, Respecting the competence of other professions.
- ✓ Understanding about Taking initiative and Promoting the culture of openness.
- ✓ Depicting Loyalty towards Goals and objectives.

Approved by
G.O. Jyothsna B.
(Dr. G.O. Jyothsna Devi)

Text Books:

R R Gaur, R Sangal, G P Bagaria, 2009, A Foundation Course in Human Values and Professional Ethics.

Bhatia, R. & Bhatia, A (2015) Role of Ethical Values in Indian Higher Education.

References:

- Ivan Illich, 1974, Energy & Equity, The Trinity Press, Worcester, and Harper Collins, U
- E.F. Schumacher, 1973, Small is Beautiful: a study of economics as if people mattered, Blond & Briggs, Britain.
- Sussan George, 1976, How the Other Half Dies, Penguin Press. Reprinted 1986, 1991
- Donella H. Meadows, Dennis L. Meadows, Jorgen Randers, William W. Behrens III, 1972, Limits to Growth – Club of Rome's report, Universe Books.
- A Nagraj, 1998, Jeevan Vidya EkParichay, Divya Path Sansthan, Amarkantak.
- P L Dhar, RR Gaur, 1990, Science and Humanism, Commonwealth Publishers.
- A N Tripathy, 2003, Human Values, New Age International Publishers.

Mode of Evaluation:

Assignment/ Seminar/Continuous Assessment Test/Semester End Exam.

Co curricular Activities:

1. Visit to an Old Age Home and spending with the inmates for a day.
2. Conduct of Group Discussions on the topics related to the syllabus.
3. Participation in community service activities.
4. Working with a NGO like Rotary Club or Lions International, etc.

SRI VENKATESWARA UNIVERSITY :: TIRUPATI
HUMAN VALUES AND PROFESSIONAL ETHICS
MODEL QUESTION PAPER

I SEMESTER - W.E.F. 2020-21

Time: 1½ Hour(90 Min.)

Max.Marks: 50

SECTION-A

I. Answer any **FOUR** Questions:

4x5=20

1. Illustrate the content of Value Education.
2. What are the basic guidelines for Value Education?
3. Explain Moral Values in Value Education?
4. Write on basic unit of the Human Interactions?
5. What do you mean by differentiation in relationship?
6. What can be the basis of undivided society for the word family?
7. Write about the need of Professional Integrity?
8. Explain the significance of positive cooperation in professions.

II. Answer any **THREE** Questions

3X10=30

9. Explain and justify the need of the Value Education in our daily life?
10. Brief about the classification of the Value Education.
11. Explain Set of proposals to verify Harmony in the Family?
12. Write the role of trust and respect as Foundation Value in Complete Human Relationship?
13. Write about role of loyalty in achieving the goals and objectives?
14. Write the need and significance of promoting the culture of openness?

Approved by
G. D. Jyothirani
(Dr G. D. Jyotheeswari Devi)

SRI VENKATESWARA UNIVERSITY :: TIRUPATI
B.VOC. DEGREE COURSE IN HORTICULTURE

FIRST YEAR – FIRST SEMESTER
Under CBCS W.E.F. 2020-21

GENERAL EDUCATION COMPONENT

Skill Development Course-I: FUNDAMENTALS OF MICROBES AND NON-VASCULAR PLANTS

(Viruses, Bacteria, Fungi, Lichens, Algae and Bryophytes)

Total 30 hrs (02h/wk), 02 Credits & Max 50 Marks

Theory: Learning Outcomes:

On successful completion of this course, the students will be able to:

- Explain origin of life on the earth.
- Illustrate diversity among the viruses and prokaryotic organisms and can categorize them.
- Classify fungi, lichens, algae and bryophytes based on their structure, reproduction and life cycles.
- Analyze and ascertain the plant disease symptoms due to viruses, bacteria and fungi.
- Recall and explain the evolutionary trends among amphibians of plant kingdom for their shift to land habitat.
- Evaluate the ecological and economic value of microbes, thallophytes and bryophytes.

Unit – 1: Origin of life and Viruses

1. Origin of life, concept of primary Abiogenesis; Miller and Urey experiment. Five kingdom classification of R.H. Whittaker
2. Discovery of microorganisms, Pasteur experiments, germ theory of diseases.
3. Shape and symmetry of viruses; structure of TMV and Gemini virus; multiplication of TMV; A brief account of Prions and Viroids.
4. A general account on symptoms of plant diseases caused by Viruses. Transmission of plant viruses and their control.
5. Significance of viruses in vaccine production, bio-pesticides and as cloning vectors.

Unit – 2: Special groups of Bacteria and Eubacteria

1. Brief account of Archaeobacteria, Actinomycetes and Cyanobacteria.
2. Cell structure and nutrition of Eubacteria.
3. Reproduction- Asexual (Binary fission and endospores) and bacterial recombination (Conjugation, Transformation, Transduction).
4. Economic importance of Bacteria with reference to their role in Agriculture and industry (fermentation and medicine).
5. A general account on symptoms of plant diseases caused by Bacteria; Citrus canker.

Unit – 3: Fungi & Lichens

1. General characteristics of fungi and Ainsworth classification (upto classes).
2. Structure, reproduction and life history of (a) *Rhizopus* (Zygomycota) and (b) *Puccinia* (Basidiomycota).
3. Economic uses of fungi in food industry, pharmacy and agriculture.
4. A general account on symptoms of plant diseases caused by Fungi; Blast of Rice.
5. Lichens- structure and reproduction; ecological and economic importance.

Text books:

- Botany – I (Vrukshasastram-I) : Telugu Akademi, Hyderabad
- Pandey, B.P. (2013) *College Botany, Volume-I*, S. Chand Publishing, New Delhi
- Hait, G., K. Bhattacharya & A.K. Ghosh (2011) *A Text Book of Botany, Volume-I*, New Central Book Agency Pvt. Ltd., Kolkata
- Bhattacharjee, R.N., (2017) *Introduction to Microbiology and Microbial Diversity*, Kalyani Publishers, New Delhi.

Books for Reference:

- Dubey, R.C. & D.K. Maheswari (2013) *A Text Book of Microbiology*, S. Chand & Company Ltd., New Delhi
- Pelczar Jr., M.J., E.C.N. Chan & N.R. Krieg (2001) *Microbiology*, Tata McGraw- Hill Co, New Delhi
- Prescott, L. Harley, J. and Klein, D. (2005) *Microbiology, 6th edition*, Tata McGraw –Hill Co. New Delhi.
- Alexopoulos, C.J., C.W. Mims & M. Blackwell (2007) *Introductory Mycology*, Wiley & Sons, Inc., New York
- Mehrotra, R.S. & K. R. Aneja (1990) *An Introduction to Mycology*. New Age International Publishers, New Delhi
- Kevin Kavanagh (2005) *Fungi ; Biology and Applications* John Wiley & Sons, Ltd., West Sussex, England
- John Webster & R. W. S. Weber (2007) *Introduction to Fungi*, Cambridge University Press, New York
- Fritsch, F.E. (1945) *The Structure & Reproduction of Algae (Vol. I & Vol. II)* Cambridge University Press Cambridge, U.K..
- Bold, H.C. & M. J. Wynne (1984) *Introduction to the Algae*, Prentice- Hall Inc., New Jersey
- Robert Edward Lee (2008) *Phycology*. Cambridge University Press New York
- Van Den Hoek, C., D.G. Mann & H.M. Jahns (1996) *Algae : An Introduction to Phycology*. Cambridge University Press, New York
- Shaw, A.J. & B. Goffinet (2000) *Bryophyte Biology*. Cambridge University Press, New York.

SRI VENKATESWARA UNIVERSITY :: TIRUPATI
B.VOC. DEGREE EXAMINATION IN HORTICULTURE

FIRST YEAR – FIRST SEMESTER
Under CBCS W.E.F. 2020-21

GENERAL EDUCATION COMPONENT

**Skill Development Course-I: FUNDAMENTALS OF MICROBES AND NON-VASCULAR
PLANTS**

(Viruses, Bacteria, Fungi, Lichens, Algae and Bryophytes)

MODEL QUESTION PAPER

Time: 1 ½ hours (90 Min.)

Marks: 50

PART – A

Answer any **Four** of the following question. Each Question carries 5 Marks **(4X5=20M)**

1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	

PART – B

Answer any Three of the following Questions. Each Question carries 10 Marks (3X10= 30M)

9.	
10.	
11.	
12.	
13.	
14.	

SRI VENKATESWARA UNIVERSITY :: TIRUPATI
B.VOC. DEGREE COURSE IN HORTICULTURE

FIRST YEAR – FIRST SEMESTER
Under CBCS W.E.F. 2020-21

GENERAL EDUCATION COMPONENT
Skill Development Course-II: PLANT NURSERY

Total 30 hrs (02h/wk),

02 Credits & Max Marks: 50

Learning Outcomes :

On successful completion of this course students will be able to;

- 1. Understand the importance of a plant nursery and basic infrastructure to establish it.*
- 2. Explain the basic material, tools and techniques required for nursery.*
- 3. Demonstrate expertise related to various practices in a nursery.*
- 4. Comprehend knowledge and skills to get an employment or to become an entrepreneur in plant nursery sector.*

Syllabus:

Unit-1 :Introduction to plant nursery

06 Hrs.

1. Plant nursery: Definition, importance.
2. Different types of nurseries –on the basis of duration, plants produced, structure used.
3. Basic facilities for a nursery; layout and components of a good nursery.
4. Plant propagation structures in brief.
5. Bureau of Indian Standards (BIS-2008) related to nursery.

Unit- 2 :Necessities for nursery

09 Hrs.

1. Nursery beds – types and precautions to be taken during preparation.
2. Growing media, nursery tools and implements, and containers for plant nursery, in brief.
3. Seeds and other vegetative material used to raise nursery in brief.
4. Outlines of vegetative propagation techniques to produce planting material.
5. Sowing methods of seeds and planting material.

Unit-3 :Management of nursery

09 Hrs.

1. Seasonal activities and routine operations in a nursery.
2. Nursery management – watering, weeding and nutrients; pests and diseases.
3. Common possible errors in nursery activities.
4. Economics of nursery development, pricing and record maintenance.
5. Online nursery information and sales systems.

SRI VENKATESWARA UNIVERSITY :: TIRUPATI
B.VOC. DEGREE EXAMINATION IN HORTICULTURE

FIRST YEAR – FIRST SEMESTER

Under CBCS W.E.F. 2020-21

GENERAL EDUCATION COMPONENT

Skill Development Course-II: PLANT NURSERY

MODEL QUESTION PAPER

Time: 1 ½ hours (90 Min.)

Marks: 50

PART – A

Answer any **Four** of the following question. Each Question carries **5 Marks** (4X5=20M)

1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	

PART – B

Answer any **Three** of the following Questions. Each Question carries **10 Marks** (3X10= 30M)

9.	
10.	
11.	
12.	
13.	
14.	

SRI VENKATESWARA UNIVERSITY :: TIRUPATI
B.VOC. DEGREE COURSE IN HORTICULTURE

FIRST YEAR – FIRST SEMESTER

Under CBCS W.E.F. 2020-21

SKILL COMPONENT

Core Paper-I: PRINCIPLES OF HORTICULTURE CROPS

Learning outcome:

After complete of these courses, students should be able to be

- Understand the significance of horticulture, and know about botanical Names.
- Production in national and international level.
- Know about Definitions and science terminology of plants
- advantages and disadvantages of propagation
- Understand about Purpose of nurseries
- Know and understand about types of gardens
- Understand about significance and maintenance of lawn, plants
- Know about orchard cultivation
- Learn about types of culture ,irrigation process etc.,

SYLLABUS

Unit –I (12 h)

Definition, Scope, Importance and production of horticulture crops in national level, Branches of Horticulture and Classification of Horticultural Crops with botanical names and zones/areas of A.P & India, Research institutes of Horticulture in India and Andhra Pradesh, and nutritive values.

Unit-II (12 h)

Definition, scope, objectives, Classification of nursery, examples of nursery plants, components, establishment (location, climate and transport, site, soil, water, manure, labour etc.) and maintenance of a nursery, Definition, Types (asexual and sexual), Advantages and disadvantages of Propagation methods in horticulture., Definition and objectives of Soilless (Hydroponics /water)culture with examples.,

Unit-III (12 h)

Definition, scope, principle, importance of gardening, Formal and Informal Lawn and its Maintenance, Types of garden namely Hindu type gardens (vanams), natural garden, wild garden, Mughal garden, Persian garden, Italian garden, French garden, English garden, Japanese garden and popular gardens in India and special types of gardening(namely roof garden, sunken garden, vertical garden, terrace garden, water garden, bog garden, shade garden, rock garden, terrarium, bottle garden, window garden). Characteristics and importance of Lawn and types of lawn grass, Establishment and maintenance of lawn, Significance and utility of various plants (annuals, biennials and herbaceous perennials. Shrubs, trees, climbers and creepers, cacti and succulents, indoor plants, ornamental palms and bulbous plants etc.,) in landscaping.

Unit-IV (12 h)

Definition, Scope and significance and classification of orchards/fruits, Objectives of Orchard floor/Soil management, establishment (location, site, laying out, planning, Types and planting season, planting distance, High density of planting system, planting season, planting method and transplanting) and cultivation of Orchards (Soil management, saving moisture ,organic farming) and production., Factors Influencing on Crop Production and rejuvenation of old orchards.

Unit –V (12 h)

Advantages of Clean cultivation, sod culture and mulch, uses of herbicides, Inter cropping, cover crops, Nutrition management, Pruning and training (plant management), Plant protection against pests and diseases, Types of mulching, Weed management, Definition and types of irrigation management, Bearing habits/fruitletting, fruitfulness and causes of unfruitfulness, Maturity and harvest. Post harvest handling, utilization and marketing.

Books:

- 1.Chadha, K.L. 2001. Handbook of Horticulture, ICAR, New Delhi.
2. Jitendra Singh, 2012. Basic Horticulture. Kalyani Publishers, New Delhi.
3. Randhawa, G.S. and Mukhopadhyaya, A.1994. Floriculture in India. Allied Publishers Pvt. Ltd., New Delhi.
- 4 .Kumar, N. 1997. Introduction to Horticulture. Rajyalakshmi Publications, Nagorcoil, Tamilnadu.
5. Chattopadhyaya, P.K.2001. A Text Book on Pomology (Fundamental of fruit growing).

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B.VOC. DEGREE COURSE IN HORTICULTURE

FIRST YEAR – FIRST SEMESTER
Under CBCS W.E.F. 2020-21

SKILL COMPONENT

Practical Paper-I: PRINCIPLES OF HORTICULTURE CROPS

Hours:-30

Marks: 50

Credit: 02

1. Practicing of grafting method.
2. Practicing of budding method.
3. Types and methods of irrigation.
4. Collect and prepare Herbarium of various lawn grasses (from internet/ natural/model)
5. Prepare the landscaping of Herbarium plants 1 (from internet/ natural/model)
6. Practicing model kitchen garden
7. Identification of various seeds.
8. Various types of nursery plants for growing of flowering, fruits, Vegetables etc.,
9. Visit to local Nurseries/ horticulture department/institutes/ any university

* Field note book must be submitted at the time of Practical Examination

Scheme of valuation

Practical paper- I PRINCIPLES OF HORTICULTURE

Marks: 50

Time: 3 h

- | | |
|--|----------|
| 1. Explain the budding method | 7 marks |
| 2. Prepare the 10 herbarium plants and grass | 10 marks |
| 3. Preparation of garden | 7 Marks |
| 4. Establish and maintenance of Nursery for growing of flower/fruits/ vegetables | 10 Marks |
| 5. Field note book | 6 Marks |
| 6. Certified record | 10 Marks |

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FIRST YEAR – FIRST SEMESTER

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SKILL COMPONENT

Core Paper-II: FUNDAMENTALS OF PLANT PHYSIOLOGY

Learning outcome:

After complete of these courses, students should be able to be

- Understand about objectives of plant physiology
- Understand about relation water and plants
- Role of plants hormones
- Understand about differences between C3, C4, and CAM with examples.
- Learn about definitions, science terminology
- Understand about Seed dormancy
- Provide hands- on- experience

Unit-I (12 h)

Morphology of plant, Classification of plants and significance of plants ,Differences between monocot and dicot plants ., Definition, scope, objectives, importance of physiology.

Unit-II (12 h)

water relation in plants: Role of water in metabolism, Role of phloem and xylem water potential, osmosis, inhibition, diffusion and its components, Measurements of water potential in plants and absorption of water and Mechanism of absorption and ascent of sap., Structure, classification, mechanism of stomata, Osmotic pressure, guttation, stem bleeding , Definition and types, mechanism of transpiration and differences between translocation and transpiration, Factors affecting on transpiration.

Unit- III (12 h)

Definition, objectives, Classification of nutrition, Plant nutrition essential and mechanism of absorption , Role of Nutrients in plant metabolism and Hidden hunger (lack of vitamins and minerals), Sand/Soil culture and soilless culture(Hydroponics and aeroponics).

Unit-IV (14 h)

Structure and function of chloroplast and mitochondria, and Peroxisome, Dark and light reactions, cyclic and non-cyclic electron transfer, C3, C4and CAM metabolism and advantages. Differences between the C3 and C4 and CAM with examples and difference between Photosynthesis and Photorespiration.

Unit- V (10 h)

Photoperiodism – short, long and day neutral plants, Definition and classification of stress in plants (abiotic physical namely floods, drought, temperature, light and radiation and chemical I e pesticides, insecticides, heavy metals, pollution etc.), biotic (pest, diseases, weed, human activity etc.), Plant growth hormones namely Auxins, Gibberellins Cytokinins, Ethylene and Absciscic Acid., Definition, types of Seed dormancy and methods to overcome dormancy, and role of sprouts to human health., commercial applications of plant growth regulators.

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B.VOC. DEGREE COURSE IN HORTICULTURE

FIRST YEAR – FIRST SEMESTER
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SKILL COMPONENT

Practical Paper-II: FUNDAMENTALS OF PLANT PHYSIOLOGY

Time: 3 h

Marks: 50

Credit: 02

1. Measurement of leaf area by different methods
2. Experiment to demonstration of transpiration
3. Estimation of photosynthetic pigments, i.e., paper chromatography
4. Identification of disorders nutrients of plants
5. Factors effecting on the seed germination (i.e., temperature, light and water, etc.,)
6. Role of plant growth hormones (structure and significance)
7. Identification and Collection the nutrient deficiencies plant leaves for preparation of herbarium.
8. Role of sea weed extract (foliar).
9. Study of morphology of any three plants namely related fruits, vegetables, flowers.

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B.VOC. DEGREE COURSE IN HORTICULTURE

FIRST YEAR – FIRST SEMESTER
Under CBCS W.E.F. 2020-21

SKILL COMPONENT

Core Paper-III: FLORICULTURE MANAGEMENT AND PLANT PATHOLOGY

Hours: 60

Marks: 75

Credits: 04

Learning outcome:

After complete of these courses, students should be able to be

- Understand the floriculture management
- Know and Learn about plant pathology
- Understand about causes of diseases in various crops.

Unit –I (12 h)

Definition, Scope and Objectives of floriculture, Production of floriculture scenario in India and Andhra Pradesh, Export and import of flowers in India, Areas and varieties of flowers with botanical names. Classification of flowers (Based on flower color, season of growing, purpose, mode of propagation etc.). Differences between cut and loose flowers with examples.

Unit –II (12 h)

Taxonomy and identification of flowers varieties namely Rose, Chrysanthemums, Marigold, Jasmine, Carnation, Gladiolus, Orchids, Aster, Daisy, Anthurium, Tuberose, Crossandra, Lilium etc., Preparation of garlands, bouquets and Common leaves used in flower arrangements namely Cypress, Podocarpus, Asparagus, Palms, Cycads, Ferns, and Eucalyptus.

Unit-III (12 h)

Floriculture: climate, Soil, varieties, Propagation methods, training and Pruning, Irrigation, harvest yields, production techniques of flower plants, Post harvest techniques of flowers and dehydration techniques for drying of flowers. Propagation techniques of flowers plants

Unit –IV (10 h)

History, Definition, scope and objectives of Plant Pathology, classification of plant pathology (Infection/biotic and non-infection/abiotic and mesobiotic) with examples.

Unit-V (14 h)

Diseases management in vegetable crops (Tomato, Capsicum, Chili, Crucifers, Potato, Leafy vegetables, etc.), Diseases management in fruit crops (Mango, Citrus, Banana, Guava, Sapota, Papaya, Pomegranate, Apple etc.), Diseases management in floriculture (cut and loose). Biological control of horticultural crop diseases.

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SKILL COMPONENT

Practical Paper-III: FLORICULTURE MANAGEMENT AND PLANT PATHOLOGY

Hours: 30

Marks: 50

Credits: 02

1. Different types of diseases in fruits crops (Collect the photos from natural/ download the figures)
2. Identification of diseases in Vegetables namely Tomato, Ladies finger, potato, Brinjal, Cauliflower, etc.,)
3. Taxonomy, identification and Description of commercial flowers (minimum 8)
4. Preparation of Bouquet and garlands
5. Visit to vegetable farm, Orchard farm and floriculture

*Field note book should be submitted at the time of University practical examination.

References:

1. Bhattacharjee.S.K and Lakshman Sharda De.2003. Advanced commercial floriculture. Aavishar Publisher and Distributors, Jaipur
2. Bose,T.K., YadavL.P., Pal. P, Parthasarathy, V.A and P. Das. 2003. Commercial flowers– Vol.I and II Second Revised Edition. Naya Udyog, Kolkata
3. Prasad, S. and U.Kumar, 2003. Commercial floriculture. Agrobios, Jodhpur
4. Roy,A. Larson 1992. Introducton of Floriculture International Book DistributingCompany, Lucknow.
5. Singh, R.S plant diseases
6. Rangaswami G and Mahadevan A, Diseases of crop plant in india
7. Chandha, K.L. (ICAR) 2002, 2001. Hand book of Horticulture. ICAR, New Delhi

Web Resources

- 1) www.floriculture today.com
- 2) www.Hitech horticulture.com
- 3) www.icar.org.in
- 4) www.wikihow.com
- 5) www.theflowerexpert.com

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INDUSTRIAL INTERNSHIP
Industrial Training for 30 days

Total Credits	Total hours / week	Total hour / semester
03	36	144

1. Industrial Training for 30 days

30 days of internship to provide industrial exposure to the students through internship with various food processing industries to develop good practical knowledge beyond the classroom experience.

2. Report writing.

3. Seminar presentation

SRI VENKATESWARA UNIVERSITY :: TIRUPATI
B.VOC. DEGREE EXAMINATION IN HORTICULTURE

FIRST YEAR – FIRST SEMESTER

Under CBCS W.E.F. 2020-21

CORE PAPERS - I, II & III

MODEL QUESTION PAPER

Time: 3 hours

Marks: 75

SECTION – A

Answer **ALL** of the following

5X2=10Marks

- 1.
- 2.
- 3.
- 4.
- 5.

SECTION – B

Answer any **THREE** of the following

3X5=15Marks

- 6.
- 7.
- 8.
- 9.
- 10.

SECTION – C

Answer **ALL** of the following

5X10=50Marks

11. A
 (or)
 B
12. A
 (or)
 B
13. A
 (or)
 B
14. A
 (or)
 B
15. A
 (or)
 B