

**Adusumilli Gopalakrishnaiah & Sugarcane Growers  
Siddhartha Degree College of Arts & Science**

Vuyyuru – 521165, Krishna District, Andhra Pradesh

(An Autonomous College in the Jurisdiction of Krishna University, Machilipatnam)

Accredited by NAAC with "A" Grade

**2021-22**



**1.3.2**

**VALUE ADDED/ CERTIFICATE PROGRAMS**

**Brochure and Syllabus along with  
Course completion certificate**

**2021-22**

## 1.3.2

**LIST OF Value Added/ Certificate program****2021-22**

S.No.	Title of the Program	Course Code
1.	Nano Technology	PHYV4C
2.	ZOHO BOOK	COM-ZB-05
3.	Business Computations	MAT-VAC-04
4.	Agri Business Environment in Andhra Pradesh	ECO-AEAP-04
5.	Artificial Intelligence	AIVAC101
6.	Human Rights and Values	POL-HRV-01
7.	Floriculture	VACBOTFC-02
8.	Mock Parliament	VAC POLT3
9.	Sericulture - Mulberry cultivation and Management	VACZOO-05
10.	Travel and Tourism	HIS-TT-01
11.	Water Analysis	CHE-WA-01
12.	Analytical Chemistry	22CH4T1
13.	Analytical Chemistry	22CH4T1
14.	Analytical Chemistry	22CH4T1
15.	Analytical Chemistry	22CH4T1
16.	Organic chemistry - 1(MOOCs)	2OCH4T1



Principal  
Adusumilli Gopalkrishnaiah & Sugarcane Growers  
Siddhartha Degree College of Arts & Science,  
Vuyyuru-521 165, Krishna District.

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Vuyyuru-521 165, Krishna District.



**AdusumilliGopalakrishnaiah &  
Sugarcane Growers Siddhartha Degree  
College of Arts and Science  
Autonomous College  
NAAC 'A' Grade College  
Vuyyuru, Krishna (Dt), Andhra Pradesh-521165**

## **VALUE ADDED COURSE**

**TITLE: NANO TECHNOLOGY**

**VAC CODE: PHYV4C**

**On 10<sup>th</sup> OCT, 2021 TO 10<sup>th</sup> NOV 2021**

**Duration of the Course: 30 Days**

**Organized By**

**Department of PHYSICS**



**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh  
(Managed by: Siddhartha Academy of General & Technical Education, Vijayawada-10)  
An Autonomous College in the Jurisdiction of Krishna University  
Accredited by NAAC with “A” Grade

2021- 2022



**DEPARTMENT OF PHYSICS**

**Value Added Course/ Certificate Course**

**Title: NANO TECHNOLOGY**

Name of the Lecturer	:	Smt.M.P.D.Parimala
Class	:	II MPC
Duration of the Course	:	Thirty Days
VAC Code	:	PHYV4C

**Objectives:** To enable the students to understand the science of nanomaterials.

**Methodology :**

**Teacher-centered Method**

**Duration:** 30 Days

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**Value Added Course / Certificate Course**

**Title: NANO TECHNOLOGY**

**Date: 10/10/2021 TO 10/11/2021**

Date	Content	Module No
10/10/2021 TO 16/10/2021	Introduction to Nanoscience, Role of particle size ,Basic concept of quantum well, quantum wire and quantum dot	I
17/10/2021 TO 23/10/2021	Types of Nanomaterials - Nanoclusters, Solid solutions, Thin film, Nanocomposites (Metal Oxide and Polymer based), Core Shell	II
24/10/2021 TO 1/11/2021	Types of nanomaterials	III
2/11/2021 TO 10/11/2021	Applications of nanomaterials	IV

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2021-22

Value Added Course / Certificate Course

Student Enrolment Sheet

Class: II B.Sc , MPC

S. No	Roll No.	Name of the Student	Signature
1	2031401	R.Nandini	R. Nandini
2	2031403	K.Sudheer	K. Sudheer
3	2031407	M.Masheswari	M. Masheswari
4	2031409	E.Alekhya	E. Alekha
5	2031428	N.Tarun	N. Tarun
6	2031426	K.Venkata Rohit	K. Venkata Rohit
7	2031413	M.Akhil	M. Akhil
8	2031415	I.Manoj Kumar	I. Manoj Kumar
9	2031417	V.Jyothi	V. Jyothi
10	2031422	K.Supraja	K. Supraja
11	2031425	G.Maneesha	G. Maneesha
12	2031410	J.Priyanka	J. Priyanka
13	2031414	N.Pavan Sai	N. Pavan Sai
14	2031412	SK.Naziya Sulthana	SK. Naziya Sulthana
15	2031418	G.Gopala Krishna	G. Gopala Krishna

  
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Department of Physics

Value Added Course / Certificate Course

Title: NANO TECHNOLOGY

Marks List

Class: II MPC,EM

S. No	Roll No.	Name of the Student	Marks
1	2031401	R.Nandini	10
2	2031403	K.Sudheer	09
3	2031407	M.Masheswari	10
4	2031409	E.Alekhyia	10
5	2031428	N.Tarun	10
6	2031426	K.Venkata Rohit	09
7	2031413	M.Akhil	10
8	2031415	I.Manoj Kumar	10
9	2031417	V.Jyothi	09
10	2031422	K.Supraja	10
11	2031425	G.Maneesha	09
12	2031410	J.Priyanka	09
13	2031414	N.Pavan Sai	09
14	2031412	SK.Naziya Sulthana	10
15	2031418	G.Gopala Krishna	08

*[Signature]*  
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*[Signature]*  
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Sl.No	Roll No	Student Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
1	203140 1	R.Nandini	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	14
2	203140 3	K.Sudheer	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	14
3	203140 7	M.Masheswari	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	14
4	203140 9	E.Alekhyia	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	14
5	203142 8	N.Tarun	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	14
6	203142 6	K.Venkata Rohit	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	14
7	203141 3	M.Akhil	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	14
8	203141 5	L.Manoj Kumar	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	14
9	203141 7	V.Jyothi	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	14
10	203142 2	K.Supraja	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	14
11	203142 5	G.Maneesha	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	14
12	203141 0	J.Priyanka	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	14
13	203141 4	N.Pavan Sai	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	14
14	203141 2	SK.Naziya Sulthana	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	14
15	203141 8	G.Gopala Krishna	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	14

**Value Added Course / Certificate Course - Attendance Register**

Class / Section: II B.Sc. MPC Year : II<sup>nd</sup>  
 Paper: Physics Lecturer: \_\_\_\_\_  
 Department: physics  
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of the HOD

Signature

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Value Added Course / Certificate Course - Attendance Register

Sl.No	Roll No	Student Name	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
1	2031401	R.Nandini	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	14
2	2031403	K.Sudheer	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	14
3	2031407	M.Masheswari	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	14
4	2031409	E.Alekhya	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	14
5	2031428	N.Tarun	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	14
6	2031426	K.Venkata Rohit	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	14
7	2031413	M.Akhil	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	14
8	2031415	I.Manoj Kumar	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	14
9	2031417	V.Jyothi	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	14
10	2031422	K.Supraja	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	14
11	2031425	G.Maneesha	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	14
12	2031410	J.Priyanka	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	14
13	2031414	N.Pavan Sai	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	14
14	2031412	SK.Naziya Sulthana	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	14
15	2031418	G.Gopala Krishna	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	14

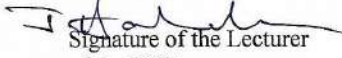
Class / Section: II B.Sc., MPC  
Paper:

Year : II<sup>nd</sup>

Department : physics

Lecturer:

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Department of Physics

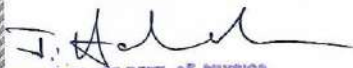
Value Added Course / Certificate Course

Title: NANO TECHNOLOGY

Feed Back Form

Name of the Student: K. Sudheer  
Class and Roll Number: 2031402

11. Is the programme interested to you (Yes/No)  Yes  No
12. Have you attended all the session (Yes/No)  Yes  No
13. Is the content of the program is adequate (Yes/No)  Yes  No
14. Have the teacher covered the entire syllabus? (Yes/No)  Yes  No
15. Is the number of hours adequate? (Yes/No)  Yes  No
6. Do you have any suggestions for enhancing or reducing the number of weeks designed for the program? (Yes/No)  Yes  No
9. On the whole, is the program useful in terms of enriching your knowledge? (Yes/No)  Yes  No
8. Do you have any suggestions on the program? (Yes/No)  Yes  No

  
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Vuyyuru-521165, Krishna District, Andhra Pradesh

Department of Physics

2021 - 2022

Value Added Course / Certificate Course


Title: NANO TECHNOLOGY

Feed Back Form


Name of the Student: R. Nandini

Class and Roll Number: 2031401

11. Is the programme interested to you (Yes/No)
12. Have you attended all the session (Yes/No)
13. Is the content of the program is adequate (Yes/No)
14. Have the teacher covered the entire syllabus? (Yes/No)
15. Is the number of hours adequate? (Yes/No)
6. Do you have any suggestions for enhancing or reducing the number of weeks designed for the program? (Yes/No)
9. On the whole, is the program useful in terms of enriching your knowledge? (Yes/No)
8. Do you have any suggestions on the program? (Yes/No)

  
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**Value Added Course / Certificate Course**

**Title : NANO TECHNOLOGY**

**Test Exercise:**

**1. Which one of the following is an example for semiconducting nanowires?**



**2. The absorption and adsorption of molecules are fast and high in \_\_\_\_\_ materials?**



**3. Which one of the following is an example for thermal properties of nanostructure?**



**4. Who built the first molecular motor based on CNT?**



**5. Which one of the following is an example for electrical properties of nanostructure?**



**6. Which one of the following used in solar cells?**



**7. What is the standard form of SEM?**

**8)The diameter of the hair can be measured in terms of \_\_\_\_\_ meters?**

**9) The nanostructures are categorized into \_\_\_\_\_ types according to their dimensions?**

**10) Who first produced nanostructured materials?**



**Value Added Course / Certificate Course**

**Title: NANO TECHNOLOGY**

**Key:**

1. Silicon
2. nanomaterials
3. melting temperature
4. Alex Zettl
5. Tunnelling current
6. Carbon nanotubes
7. Scanning Electron Microscope
8. 100 micro
9. three
10. H. Gleiter



individual atoms and molecules to make new small structures including molecular computers

Is defined as any material that has unique or novel properties, due to the nanoscale ( nano metre- u ecng+ "uvtwevwtkpi 0"É"Vjgug"ctg"hqt o gf"d { "kpeqtrqtcvkqp"qt"uvtwevwtkpi"qh" pcpqrctvkengu 0"É"Vjg { "ctg"u wdf divided into nanocrystals, nano powders, and nanotubes: A sequence of nanoscale of C60 atoms arranged in a long thin cylindrical structure.

Pcpq o cvgtkcn" r tqr gtvkgu"ecp"dg"=:vwpgf 0"d { "xct {kpi"vjg"uk | g"qh"vjg" rctvkeng"\*g 0i 0"ejcpikpi" the fluorescence colour so a particle can be identified)

## Module No -2

### **Zero dimensional nanomaterials:**

É"Ocvgtkcnu"y jgtgkp"cn"vjg"fk o gpukqpu"ctg" o gcuwgtf"y kvj k p"vjg"pcpquecng"

É"Vjg" o quv"eq o o qp"tgrtgugpvcvkqp"qh" | gtq"fk o gpukqpcn"pcpq o cvgtkcnu"ctg"pcpq"fqvu

### **One dimensional nanomaterials :**

É"Qpg"fk o gpukqp"ku"qvwkfg"vjg"pcpquecng"cpf"qvjgt"v y q"fk o gpukqpu"ctg"kp"vjg"pcpquecng"

É"Vjku"ngcfu"vq"pgg fng"nkmg-shaped nanomaterials

É"3-D materials include nanotubes, nanorods and nanowires.

É"3-D nanomaterials can be

É"C o qtr jquw"qt"et { uvcnkp g"

É"Ukping"et { uvcnkp g"qt" rqn { "et { uvcnkp g"

É"Ejg o kecnn { "rwtg"qt"ko rwtg"

É"Ogvcmke."egtc o ke"qt" rqn { o gtke 0

### **Two dimensional materials:**

É"Qpg"fk o gpukqp"nkgu"kp"vjg"pcpq o gvgt"tcpig"cpf"qvjgt"v y q"fk o gpukqpu"ctg"pqv"eqphkpgf" to the nanoscale

É"4F"pcpq o cvgtkcnu"gzjkdv" rncvg"nkmg"ujcrgu"

É"V y q"fk o gpukqpcn"pcpq o cvgtkcnu"kpenwfg"pcpqhkn o u."pcpnc { gtu"cpf"pcpqcvcvkpi u

### **Three dimensional materials:**

É"Vjtg"fk o gpukqpcn" o cvgtkcnu"ctg"pqv"eqphkpgf"kp"vjg"pcpquecng"kp"cp { "fk o gpukqp 0"Vjgug" materials are thus characterized by having three arbitrarily dimensions above 100nm



É"Ocvgtkcnu"rquuguu"cpqet { uvcnkpq"uvtwevwtg"qt"kpqxqng"vjg"rtgugpeg"qh"hgcvwtes at the nanoscale.

### Quantum effects:

É"Vjg"qxgtcnn"dgjcxkqt"qh"dwnm"et { uvcnkpq" o cvgtkcnu"ejcpigu"y jgp"vjg"fk o gpukqpu"ctg" reduced to the nanoscale.

É"Hqt"2-D nanomaterials, where all the dimensions are at the nanoscale, an electron is confined in 3D space. No electron delocalization (freedom to move) occurs.

É"Ht"3F"pcpq o cvgtkcnu."gngevtqp"eqphkpg o gpv"qewtu"kp"4F" y jgtgcu"fgnqecnk | cvkqp"vcmgu" place along the long axis of then nanowirenanorod/nanotube

É"Kp"vjg"ecug"qh"4F"pcpq o cvgtkcnu."vjg"eqpfwevkqp"gnectrons will be confined across the thickness but delocalized in the plane of the sheet.

### Electrons confinement:

É"Hqt"2F"pcpq o cvgtkcnu"vjg"gngevtqpu"ctg"hwmm { "eqphkpgf0

É"Hqt"5F"pcpq o cvgtkcnu"vjg"gngevtqpu"ctg"hwmm { "fgnqecnk | gf"

É"Kp"3F"cpf"4F"pcpq o cvgtkals, electron confinement and delocalization coexist.

É"Vjg"ghhgev"qh"eqphkpg o gpv"qp"vjg"tguwnkpi"ggpti { "uvcvgu"ecp"dg"ecnewncvgf"d { "swcpw o" mechanics as the particle in the box problem.

A electron is considered to exist inside of an infinitely deep potential well from which it cannot escape and is confined by the dimensions of the nanostructure.

### nanomaterials are again organized into four types as follows:

- (i) Carbon based material
- (ii) Metal based materials
- (iii) Dendrimers
- (iv) Composites

#### (i) Carbon based materials:

These are composed of carbon, taking the form of hollow spheres, ellipsoids or tubes. The spherical and ellipsoidal forms are referred as fullerenes, while cylindrical forms are called nanotubes.

#### (ii) Metal based materials:

These include quantum dots, nanogold, nanosilver and metal oxides like TiO<sub>2</sub>. A quantum dot is a closely packed semiconductor crystal comprised of hundreds or thousands of atoms, whose size is on the order of a few nanometers to a few hundred nanometers.

#### (iii) Dendrimers:

Dendrimers are repetitively branched molecules. The name comes from the Greek word  $\delta\epsilon\delta\rho\mu$  "tree". The surface of a dendrimer has numerous chain ends, which can perform specific chemical functions.

Dendrimers are used in molecular recognition, nanosensing, light harvesting, and opto-electrochemical devices. They may be useful for drug delivery.

#### **(iv) Composites:**

Composites are combination of nanoparticles with other nanoparticles or with larger, bulk-type materials. Nanoparticles like nanosized clays are added to products (auto parts, packaging materials, etc.) to enhance mechanical, thermal, and flame-retardant properties

### **Module No - 3**

#### **NANOWIRES:**

These are defined as the structures which have the diameters of the order of a nanometre and an unconstrained length. i.e., nanowires are much longer than their diameters.

These are also called quantum wires because at this scale they have different quantum mechanical effects. There are different types of nanowires.

For example: carbon nanowires, molecular nanowires, metallic nanowires, etc.

**Applications** They are useful in digital computing. These are used for the preparation of active electronic components like p-n junction, logic gates, etc.

They have potential applications in high-density data storage. Silver chloride nanowires are used as photocatalysts to decompose organic molecules in polluted water.

#### **QUANTUM DOTS :**

Quantum dots (QDs) were first discovered by A. Ekimov in glass matrix and by L. Brus in colloidal solutions (Fig. 7). These are the semiconductor nanoparticles between 10 and 100 atoms in diameter. The properties of QDs can vary depending on its shape and size.

These are not all uniform. In spite of having a variety of applications, QDs are a source of toxic compounds containing in their core. The QDs toxicity may be due to the leaching of toxic heavy metals from the colloid form.

The toxicity may also be originated from intrinsic properties of the size and surface chemistry of quantum dots. Such materials might have potential risks to human health but still the use of these materials is growing quickly

#### **Applications:**

These are used in transistors, solar cells, diode lasers, LEDs, etc.

These may increase the efficiency of silicon photovoltaic cells. These are also significant for optical applications like amplifiers, biological sensors, etc.

These are used as photocatalysts. They have potential applications in spectroscopy and fluorescent biomedical imaging

## **NANOCLUSTURE**

It is the grouping of a number of nanoparticles in a narrow size distribution having at least one-dimension between 1 and 10 nm. Simply, they are fine aggregates of atoms or molecules.

Nanoclusters contain a couple of hundred atoms but the larger aggregates may have more than 1000 atoms (called nanoparticles). The number of atoms in the clusters of critical size with higher stability is called magic number. The nanoclusters are bridge between bulk materials and atomic or molecular structures

### **Applications:**

A bulk material has constant physical properties but at the nanoscale, it has many properties. It is used in biotechnology and pharmacology.

It has potential applications in microelectronics, telecommunications, sensors, transducers, electroluminescent displays, catalysis, etc.

### **THINFILMS:**

A thin film is a layer of material ranging from fractions of a nanometer (monolayer) to several micrometers in thickness. The controlled synthesis of materials as thin films (a process referred to as deposition) is a fundamental step in many applications.

#### **1.MechanicalThinFilms**

Mechanical thin films are unique thin films typically composed of hard, corrosion, and wear-resistant materials. In coating applications, thin mechanical films can be applied to virtually any surface  $\hat{o}$  metals, plastics, glass, and so on  $\hat{o}$  to provide additional strength against friction and abrasion. They also offer superior anticorrosive protection, thus allowing them to be deployed in various industries and applications, such as aerospace engineering and logistics.

#### **2.OpticalThinFilms**

Optical thin films are a coating typically applied to materials to give the desired optical r t q r g t v k g u 0 " V j g { \hat{o} t g " q p g " q h " v j g **innovations in the solar energy** sector to make flexible, lightweight, and ecologically friendly solar panels.

These specialized coatings can enhance performance, increase reflectivity, or change color, depending on the underlying layer mix and the protective nature of the film. Any product exposed to sunlight is a potential beneficiary of these unique thin films, as they help guard c i c k p u v " w n v t c x k q n g v " t c f k e v k q p e p f h c f k p i f w g v q v j g u w p \hat{o} u r a y s .

#### **3.ElectronicThinFilms**

## semiconductors

### 4. Magnetic Thin Films

H

### 5. Thermal Thin Films

H

H

### 6. Chemical Thin Films

H

a limitless number

of creative possibilities for engineers and manufacturers alike.

### Nanocomposites:

Nanocomposites are those composites in which one phase has nanoscale morphology like nanoparticles, nanotubes, or lamellar nanostructure. They have multiphases, so are multiphase materials, at least of the phases should have dimensions in the range of 10<sup>6</sup> to 100 nm.

Nanocomposites are materials that have a solid structure in which the distance between the phases is leastwise formed of a dimension with nanoscale size and general form of an inorganic matrix set in the organic phase, or vice versa, from an organic matrix set in the inorganic phase.

The three types of nanocomposites based on their matrix are ceramic matrix nanocomposite CMNC, polymer matrix nanocomposites PMNC and metal matrix nanocomposites MMNC

The important advantages of polymer nanocomposites are due to increased stiffness, increased resistance to fire, increased thermal and dimensional stability, good optical properties, and improved barrier effect.

### **Core-shell:**

Core-shell type nanoparticles are a type of biphasic materials which have an inner core structure and an outer shell made of different components. These particles have been of interest as they can exhibit unique properties arising from the combination of core and shell material, geometry, and design

The core/shell type nanoparticles can be broadly defined as comprising a core (inner material) and a shell (outer layer material). close interaction, including

- inorganic/inorganic, inorganic/organic,
- organic/inorganic, and
- organic/organic materials.

The electroactive materials applied in the core/shell structure include carbon materials, conducting polymers, metals, metal hydroxides, metal oxides and metal sulfides, while zero-dimensional, one-dimensional, two-dimensional, and three-dimensional structures are considered for the core/shell material.

The core/shell nanoparticles are mainly designed for biomedical applications based on the surface chemistry, which increases its affinity to bind with drugs, receptors, ligands, etc . This has led to the synthesis of novel nanoparticles, which in sync with the biological system, compared to bulk material.

## **Module No -4**

### **APPLICATIONS OF NANOTECHNOLOGY:**

Nanotechnology and nanomaterials can be applied in all kinds of industrial sectors. They are usually found in these areas:

#### **Electronics**

Carbon nanotubes are close to replacing silicon as a material for making smaller, faster and more efficient microchips and devices, as well as lighter, more conductive and stronger quantum nanowires. Graphene's properties make it an ideal candidate for the development of flexible touchscreens.

#### **Energy**

A new semiconductor developed by Kyoto University makes it possible to manufacture solar panels that double the amount of sunlight converted into electricity. Nanotechnology also

lowers costs, produces stronger and lighter wind turbines, improves fuel efficiency and, thanks to the thermal insulation of some nanocomponents, can save energy.

## **Biomedicine**

The properties of some nanomaterials make them ideal for improving early diagnosis and treatment of neurodegenerative diseases or cancer. They are able to attack cancer cells **selectively** without harming other healthy cells. Some nanoparticles have also been used to enhance pharmaceutical products such as sunscreen.

## **Environment**

Air purification with ions, wastewater purification with nanobubbles or nanofiltration systems for heavy metals are some of its environmentally-friendly applications. Nanocatalysts are also available to make chemical reactions more efficient and less polluting.

## **Food**

In this field, nanobiosensors could be used to detect the presence of pathogens in food or nanocomposites to improve food production by increasing mechanical and thermal resistance and decreasing oxygen transfer in packaged products.

## **Textile**

Nanotechnology makes it possible to develop **smart fabrics** that don't stain nor wrinkle, as well as stronger, lighter and more durable materials to make motorcycle helmets or sports equipment.



ADUSUMILLI GOPALAKRISHNAIAH AND SUGARCANE GROWERS  
SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE,  
(AUTONOMOUS) VUYYURU A.P  
(Accredited at "A" level by NAAC, Bengaluru)



## Department of Physics

VALUE ADDED COURSE: *NANO TECHNOLOGY*

### CERTIFICATE

This is to Certify that **R.Nandini** of **II B.Sc MPC**  
has Successfully completed value added course in ***NANO TECHNOLOGY***  
Conducted by the Department of Physics from 10-10-2021 to 10-11-2021 .We wish him/her bright future

M. P. D. parimala  
Co-ordinator

  
Head of Department

  
Principal  
Adusumilli Gopalakrishnaiah & Sugarcane Growers  
Siddhartha Degree College of Arts & Science,  
Vuyyuru-521 165, Krishna District.



**ADUSUMILLI GOPALAKRISHNAIAH AND SUGARCANE GROWERS  
SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE,  
(AUTONOMOUS) VUYYURU A.P**  
(Accredited at "A" level by NAAC, Bengaluru)



## Department of Physics

**VALUE ADDED COURSE: *NANO TECHNOLOGY***

### CERTIFICATE

This is to Certify that **Mr.K.Sudheer** of **II B.Sc MPC**

has Successfully completed value added course in ***NANO TECHNOLOGY***

Conducted by the Department of Physics from 10-10-2021 to 10-11-2021 .We wish him/her bright future

*M. P. D. parimala*  
Co-ordinator

*T. Venkatesh*  
Head of Department

*Ch. Sree*  
Principal  
Adusumilli Gopalakrishnaiah & Sugarcane Growers  
Siddhartha Degree College of Arts & Science,  
Vuyyuru-521 165, Krishna District.





**Adusumilli Gopalakrishnaiah & Sugarcane Growers  
Siddhartha Degree College of Arts and Science**

**Autonomous College**

**NAAC 'A' Grade College**

**Vuyyuru, Krishna (Dt.), Andhra Pradesh-521165**

**VALUE ADDED COURSE**

**TITLE: ZOHO BOOK**

**VAC CODE: COM-ZB-05**

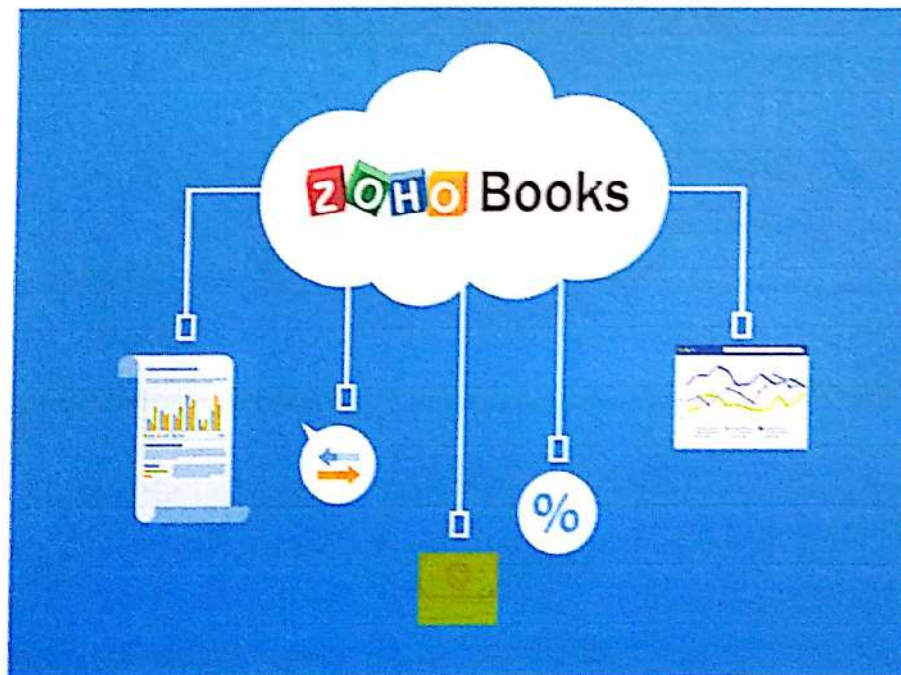
**On 1<sup>st</sup> NOV, 2021 TO 6<sup>th</sup> DEC 2021**

**2021-2022**

**Duration of the Course: 30Hrs**

**Organized By**

**Department of Commerce**



# **A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

(Managed by: Siddhartha Academy of General & Technical Education, Vijayawada-10)

An Autonomous College in the Jurisdiction of Krishna University

Accredited by NAAC with "A" Grade

ISO 9001:2015 Certified Institution



## **DEPARTMENT OF COMMERCE**

2021-2022

### **Value Added Course**

**Title: ZOHO BOOKS**

Name of the Lecturer	:	G. Kiran kumar
Class	:	II B.COM
Duration of the Course	:	30 HOURS
VAC Code	:	COM-OB-01

**Value Added Course**

**Title: ZOHO BOOKS**

**Objectives :**

- 1. Streamline Financial Management:** Zoho Books aims to simplify financial management processes for businesses. It provides tools and features to track income, expenses, invoices, and inventory in a streamlined manner. The objective is to help businesses efficiently manage their finances and make informed decisions.
- 2. Automated Bookkeeping:** Zoho Books focuses on automating various bookkeeping tasks to save time and reduce manual errors. It automates bank feeds, payment reminders, recurring transactions, and other repetitive accounting tasks. This objective aims to improve accuracy and efficiency in financial record-keeping.
- 3. Financial Reporting and Analysis:** Zoho Books aims to provide businesses with comprehensive financial reports and analysis tools. It offers a range of pre-built reports, such as profit and loss statements, balance sheets, and cash flow statements. The objective is to help businesses gain insights into their financial performance and make data-driven decisions.

**Methodology :Teacher-Centred method**

**Duration : 30 Hours**

**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**

**Title:ZOHO BOOKS**

Date: From to 01-11-2021 to 06-12-2021

Date	Content	Module No.
01-11-2021	<b>Invoicing:</b> Zoho Books allows businesses to create professional invoices and send them to customers. It supports customization of invoice templates, automatic payment reminders, and online payment integration, making it easier for businesses to get paid faster.	I
14-11-2021	<b>Expense Tracking:</b> With Zoho Books, businesses can track and categorize their expenses accurately. It provides features for recording expenses, attaching receipts, and even allows for mileage tracking. This helps in better expense management and facilitates tax deductions.	II
26-11-2021	<b>Inventory Management:</b> Businesses can track their inventory levels and manage stock movements with Zoho Books. It enables businesses to create item records, monitor stock levels, and generate reports to analyze inventory performance.	III

**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**

**Title: ZOHO BOOKS**

**Test Exercise:**

- Single Entry mode is applicable for
- We can create multiple users in Tally activating
- The shortcut used to activate calculator is
- What is MRP?
- Voucher Class for Interest calculation created based on
- We can cancel a voucher using
- Transfer of materials from one godown to another godown, use
- To remove a line at all reports screen, shortcut is
- Multiple godowns are activated from

**AG & SG SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE VUYYURU**

**(AUTONOMOUS)**

**(MANAGED BY SIDDHARTHA ACADEMY OF GENERAL & TECHNICAL  
EDUCATION VIJAYAWADA)**

Commerce	COM ZB 05	2021-2022	II.B.Com(Gen,comp)
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**SEMESTER -III**

**ZOHO BOOKS**

**Value added Course**

**DURATION: 2 HOURS**

**SECTION - A**

**Max Marks :50**

**ANSWER ANY FIVE OF THE FOLLOWING QUESTIONS**

**(5X10=50M)**

1. What are the pricing plans available in Zoho Books?
2. How does the pricing plan vary based on the number of users and the features offered?
3. Are there any discounts available for non-profit organizations or educational institutions?
4. Is there a free trial available for Zoho Books?
5. How does Zoho Books compare in terms of affordability with other accounting software options?
6. Can I customize my plan to only pay for the features I need, to reduce the cost?
7. Are there any hidden fees or charges that I should be aware of?
8. What payment options are available in Zoho Books and are there any additional transaction fees?
9. How can I ensure that I am getting the most value out of my Zoho Books subscription?
10. Is there a way to save money by paying for an annual subscription instead of monthly?

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Vuyyuru-521165, Krishna District, Andhra Pradesh

**DEPARTMENT OF COMMERCE**

**Value Added Course**

**Title: ZOHO BOOKS**

**Feed Back Form**

1. Is the programme interested to you (Yes/No) ✓
2. Have you attended all the session (Yes/No) ✓
3. Is the content of the program is adequate (Yes/No) ✓
4. Have the teacher covered the entire syllabus? (Yes/No) ✓
5. Is the number of hours adequate? (Yes/No) ✓
6. Do you have any suggestions for enhancing or reducing the number of weeks designed for the program? (Yes/No) ✓
7. On the whole, is the program useful in terms of enriching your knowledge? (Yes/No) ✓
8. Do you have any suggestions on the program? (Yes/No) ✓

*C. Jagdish*  
Signature of Student



**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh

**DEPARTMENT OF COMMERCE**  
**Value Added Course**  
**Title: ZOHO BOOKS**

**Feed Back Form**

1. Is the programme interested to you (Yes/No) ✓
2. Have you attended all the session (Yes/No) ✓
3. Is the content of the program is adequate (Yes/No) ✓
4. Have the teacher covered the entire syllabus? (Yes/No) ✓
5. Is the number of hours adequate? (Yes/No) ✓
6. Do you have any suggestions for enhancing or reducing the number of weeks designed for the program? (Yes/No) ✓
7. On the whole, is the program useful in terms of enriching your knowledge? (Yes/No) ✓
8. Do you have any suggestions on the program? (Yes/No) ✓

*K. Dyalu*  
Signature of Student



Class : B Com (Gen) Course Code : Zoho Books COM2B05

Roll No	Name of the Student	Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
21	M. Abhinav Kumar		P	P	P	A	A	P	P	P	A	P	P	P	P	P	P
22	V. Sai Kumar		P	P	P	A	A	A	A	P	P	P	P	P	A	P	P
23	M. Gayatri		P	P	P	P	A	P	P	P	A	P	A	P	A	P	A
24	P. V. Satyanarayana		P	P	P	P	A	P	P	P	A	A	P	A	P	A	P
25	G. Revathi		P	P	P	P	P	A	P	P	P	P	P	A	P	P	P
26	Mohammad Shamsul Begum		P	P	P	P	P	A	P	P	P	P	P	A	P	P	P
27	M. Farhan		P	P	P	P	P	P	P	P	P	P	P	A	P	P	P
28	M. Musabib		P	P	P	P	P	P	P	P	P	P	P	A	P	P	P
29	Abdik Gouse Mubiddin		P	P	P	P	P	P	P	P	P	P	P	A	P	P	P
30	T. Jashuva Malika Johnson		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
31	M. Chitravi		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
32	T. Raji Babu		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
33	P. S. S. D. Nagaswara Rao		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
34	M. Tharaja		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
35	I. Sujanya		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
36	B. Pujitha		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
37	D. Baba Ravi		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
38	J. Lakshmi Thirupathamma		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
39	D. Nigama Phani		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
40	B. Suresh		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
41	K. Sandeep		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
42	Y. Rajit Kumar		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
43	S. V. H. D. Varma Prasad		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
44	K. Siva Sankara Rao		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
45	A. Sai Babu		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
46	P. Lakshman Rao		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
47	G. Manika		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
48	Md. Barkathunnisa		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
49	V. Vinaya Jyothi		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

Title of the Paper : Zoho Books

16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
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ADUSUMILLI GOPALAKRISHNAIAH AND SUGARCANE GROWERS  
SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE,  
(AUTONOMOUS) VUYYURU A.P  
(Accredited at "A" level by NAAC, Bengaluru)



## Department Commerce


VALUE ADDED COURSE: ZOHO BOOK

### CERTIFICATE

This is to Certify that T. Buddi Babu.....of II.B.com(C.A.)..... has successfully completed Value Added Course in **ZOHO BOOK** organised by the Department of Commerce during the Year 2021-2022 and passed the Examination in grade.....**A**.....

  
Co-ordinator

  
Head of Department

  
Principal  
Adusumilli Gopalakrishnaiah & Sugarcane Growers  
Siddhartha Degree College of Arts & Science,  
Vuyyuru-521 165, Krishna District.



ADUSUMILLI GOPALAKRISHNAIAH AND SUGARCANE GROWERS  
SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE,  
(AUTONOMOUS) VUYYURU A.P  
(Accredited at "A" level by NAAC, Bengaluru)



## Department Commerce

VALUE ADDED COURSE: ZOHO BOOK

### CERTIFICATE

This is to Certify that ....M. Sri Lekha.....of II B.com(C.A.) has successfully completed Value Added Course in **ZOHO BOOK** organised by the Department of Commerce during the Year 2021-2022 and passed the Examination in grade....A.....

  
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Head of Department

  
Principal  
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Siddhartha Degree College of Arts & Science,  
Vuyyuru-521 165, Krishna District.

A.G.&S.G.S DEGREE COLLEGE, VUYURU



DEPARTMENT OF MATHEMATICS



Value Added Course  
on  
Business Computations

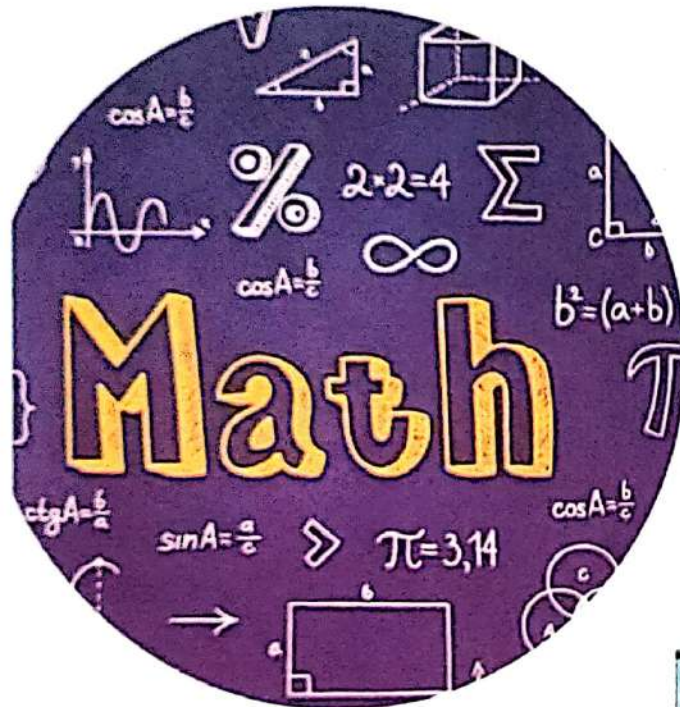
## Contact Us

Door No.2.391, College Road , Near  
Kota complex ,Vuyyuru -521165

[agsgsiddhartha@gmail.com](mailto:agsgsiddhartha@gmail.com)

[www.agsgsc.edu.in](http://www.agsgsc.edu.in)

Business Computations



Course : Business Computations  
Code : MAT-VAC-04  
Class : II MPC  
Duration: 30 Days

# **A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh  
(Managed by: Siddhartha Academy of General & Technical Education, Vijayawada-10)  
An Autonomous College in the Jurisdiction of Krishna University  
Accredited by NAAC with "A" Grade



## **DEPARTMENT OF MATHEMATICS**

2021-2022

Value Added Course

Title: Business Computations

Name of the Lecturer	:	Mohammad Noor
Class	:	II MPC
Duration of the Course	:	30 HOURS
VAC Code	:	MAT-VAC-04

# **A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

## **Value Added Course**

### **Title: BUSINESS COMPUTATIONS**

**Objectives :**

- 1. One objective is to develop proficiency in percentages. numbers accurately and efficiently. This includes mastering mental math strategies, regrouping, and carrying over digits.**
- 2. Problem-Solving Skills: Developing problem-solving skills is an important objective in computations. It includes the ability to analyze word problems, identify the correct operation to use, and apply appropriate strategies to solve them.**

**Methodology :Teacher-Centeredmethod**

**Duration : 30 Hours**



# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Value Added Course Student Enrolment Sheet

Roll.No	Student Name	F/M
20.201	Anagani Tejaswini	F
20.202	Ayesha Siddikha	F
20.203	Goga Sivani	F
20.204	Songa Blandin	F
20.205	Kalapala Sandhya	F
20.206	Juvvanapudi sneha	F
20.207	Botsa kavita	F
20.208	Putturu mounika	F
20.209	L. Durga Bhavani	F
20.211	K. Mahalakshmi	F
20.212	chandalu Munni	F
20.213	Kopparaju Aswitha	F
20.214	S. Divija vyshnavi	F
20.215	Bellam puitha	F
20.216	ch. manoj	M

  
Lecturer

  
N.V.  
HOD

  
Principal  
AG & SG Siddhartha Degree College  
of Arts & Science (Autonomous)  
VUYURU-521 165



**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**

**Title: BUSINESS COMPUTATIONS**

Date: From 02.11.2021 to 30.11.2021

Date	Content	Module No.
02.11.2021	Percentages	I
08.11.2021	Profit and Loss	II
15.11.2021	Partnership	III
24.11.2021	Simple, Compound interest	IV

**Value Added Course**

**Title: BUSINESS COMPUTATIONS**

**Test Exercise:**

1) A batsman scored 110 runs which included 3 boundaries and 8 sixes. What percent of his total score did he make by running between the wickets?

- A) 45%      B)  $45\frac{5}{11}\%$       C) 54 %      D) 50%

2) Two students appeared at an examination. One of them secured 9 marks more than the other and his marks was 56% of the sum of their marks. The marks obtained by them are:

- A) 39, 30  
B) 41, 32  
C) 42, 33  
D) 43, 34

3) A fruit seller had some apples. He sells 40% apples and still has 420 apples. Originally, he had:

- A) 588 apples  
B) 600 apples  
C) 672 apples  
D) 700 apples

4) What percentage of numbers from 1 to 70 have 1 or 9 in the unit's digit?

- A) 1  
B) 14  
C) 20  
D) 21

5) A vendor bought toffees at 6 for a rupee. How many for a rupee must he sell to gain 20%?

- A) 3      B) 4      C) 5      D) 6

6) A shopkeeper expects a gain of 22.5% on his cost price. If in a week, his sale was of Rs. 392, what was his profit?

- A)Rs. 18.20
- B)Rs. 70
- C)Rs. 72
- D)Rs. 88.25

7)A man buys a cycle for Rs. 1400 and sells it at a loss of 15%. What is the selling price of the cycle?

- A)Rs. 1090
- B)Rs. 1160
- C)Rs. 1190
- D)Rs. 1202

8)A sum of money at simple interest amounts to Rs. 815 in 3 years and to Rs. 854 in 4 years. The sum is:

- A)Rs. 650
- B)Rs. 690
- C)Rs. 698
- D)Rs. 700

9)A sum fetched a total simple interest of Rs. 4016.25 at the rate of 9 p.c.p.a. in 5 years. What is the sum?

- A)Rs. 4462.50
- B)Rs. 8032.50
- C)Rs. 8900
- D)Rs. 8925

10) How much time will it take for an amount of Rs. 450 to yield Rs. 81 as interest at 4.5% per annum of simple interest?

- A)3.5 years
- B)4 years
- C)4.5 years
- D)5 years



**A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**

**Title:** \_\_\_\_\_  
*Business Computations*

**Key:** 1)B    2)C    3)D    4)C    5)C    6)C    7)C    8)C    9)D    10)B

# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

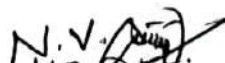
## Department of Mathematics Value Added Course Title: Business Computations


### Marks List

Class: II MPC

S. No	Roll No.	Name of the Student	Marks
1.	20.201	Anagani Tejaswini	18
2.	20.202	Ayesha Siddikha	16
3.	20.203	Goga sivani	14
4.	20.204	Songa Blandin	20
5.	20.205	Kalapala Sandhya	18
6.	20.206	Juvvanapudi sneha	16
7.	20.207	Botsa kavitha	18
8.	20.208	Puttupu Mounika	20
9.	20.209	L. Durga Bhavani	18
10.	20.211	K. Maha lakshmi	16
11.	20.212	chandolu Munni	18
12.	20.213	Kopparaju Aswitha	20
13.	20.214	S. Divija vyshnavi	20
14.	20.215	Bellam puitha	18
15.	20.216	ch. Manoj	16

  
Lecturer

  
N.V. H.O.B.

  
Principal  
AG & SG Siddhartha Degree College  
of Arts & Science (Autonomous)  
VUYURU-521 165

# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Value Added Course / Certificate Course - Attendance Register

Class / Section: IMPC

Year : 2021-22

Department of: Mathematics

Paper: MAT-VAC-04

Lecturer: Mohamed Noor

Sl.No	Roll No	Student Name	Category	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
1	20.201	Anagani Tejaswini		P	A	P	P	A	P	A	P	P	A	P	A	P	P	A	9
2	20.202	Ayesha Siddhikha		A	P	P	A	A	P	P	A	A	P	P	A	A	P	P	8
3	20.203	Goga Sivani		P	A	P	P	A	P	A	P	P	A	P	A	P	P	A	9
4	20.204	Songa Blandin		A	P	P	A	A	P	P	A	A	P	P	A	A	P	P	8
5	20.205	Kalapala Sandhya		P	A	P	P	A	P	A	P	P	A	P	A	P	P	A	9
6	20.206	Juvvanapudi Sneha		P	A	P	P	A	P	A	P	P	A	P	A	P	P	A	9
7	20.207	Batsa Kavita		A	P	P	A	A	P	P	A	A	P	P	A	A	P	P	8
8	20.208	Puttupu Maunika		P	A	P	P	A	P	A	P	P	A	P	A	P	P	A	9
9	20.209	L. Durga Bhavani		P	A	P	P	A	P	A	P	P	A	P	A	P	P	A	9
10	20.211	K. Maha Lakshmi		A	P	P	A	A	P	P	A	A	P	P	A	A	P	P	8
11	20.212	Chandolu Munnai		A	P	P	A	A	P	P	A	A	P	P	A	A	P	P	8
12	20.213	Kopparaju Aswitha		A	P	P	A	P	A	P	P	A	P	A	P	P	A	P	9
13	20.214	S. Divija Vyshnavi		P	A	P	P	A	A	P	P	A	A	P	P	A	P	A	8
14	20.215	Bellam Pooitha		A	P	P	A	P	A	P	P	P	A	P	P	A	P	A	9
15	20.216	Ch. Manoj		P	P	P	P	A	P	P	P	P	A	P	A	P	A	P	11

# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Value Added Course / Certificate Course - Attendance Register

Class / Section: 1MPC

Year : 2021-22

Department of: Mathematics

Paper: MAT-VAC-04

Lecturer: Mohammed Noor

Sl.No	Roll No	Student Name	Category	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
1	20.201	Anagani Tejaswini		P	A	A	P	P	P	A	A	P	A	A	P	A	A	P	16
2	20.202	Ayesha siddikha		A	P	A	P	P	A	P	P	A	A	P	P	A	P	A	16
3	20.203	Goga sivani		A	A	P	P	P	P	A	P	P	A	P	P	A	A	P	18
4	20.204	Songa Blandin		P	P	A	P	P	A	P	A	P	P	P	A	P	P	A	18
5	20.205	Kalapala sandhya		P	A	A	P	P	P	A	A	P	A	P	A	P	A	P	17
6	20.206	Tuvvanapudi sneha		P	P	P	P	P	P	A	A	A	A	P	P	A	A	P	18
7	20.207	Botsa kavita		A	A	P	P	P	A	P	A	A	P	P	A	P	A	P	16
8	20.208	Puttupu Mounika		P	P	A	P	A	P	P	P	P	P	A	P	P	P	A	20
9	20.209	L. Durga Bhavani		P	A	P	A	P	A	A	P	P	A	P	P	A	P	P	18
10	20.211	K. Maha lakshmi		A	P	P	A	P	A	P	P	A	P	A	P	P	A	P	17
11	20.212	chandolu muddi		P	A	P	P	A	A	P	P	P	P	P	P	P	A	A	18
12	20.213	Kopparaju Aswitha		A	P	P	A	P	A	P	A	P	P	P	P	A	P	P	19
13	20.214	S. Divija vyshnavi		P	A	P	P	A	P	P	P	P	P	P	A	P	P	A	19
14	20.215	Bellam puitha		P	A	P	P	P	A	A	P	P	A	A	A	A	P	A	15
15	20.216	ch. manoj		P	A	P	P	P	A	A	A	P	P	P	P	P	A	P	20

*Mohammed Noor*  
LECTURER

*N.V. Jayaram*  
HOD

*Praveen*  
PRINCIPAL  
AG & SG Siddhartha Degree College  
of Arts & Science (Autonomous)  
VUYURU-521 165

# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Department of MATHEMATICS

### Value Added Course

Title:

Business Computations

### Feed Back Form

1. Is the programme interested to you (Yes/No) ✓
2. Have you attended all the session (Yes/No) ✓
3. Is the content of the program is adequate (Yes/No) ✓
4. Have the teacher covered the entire syllabus? (Yes/No) ✓
5. Is the number of hours adequate? (Yes/No) ✓
6. Do you have any suggestions for enhancing or reducing the number of weeks designed for the program? (Yes/No) ✓
7. On the whole, is the program useful in terms of enriching your knowledge? (Yes/No) ✓
8. Do you have any suggestions on the program? (Yes/No) ✓



20.207

**A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**

**Title: BUSINESS COMPUTATIONS**

18  
—  
20

**Test Exercise:**

1) A batsman scored 110 runs which included 3 boundaries and 8 sixes. What percent of his total score did he make by running between the wickets?

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**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**

**Title: BUSINESS COMPUTATIONS**

$\frac{20}{20}$

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C) 20  
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ADUSUMILLI GOPALAKRISHNAIAH AND SUGARCANE GROWERS  
SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE,  
(AUTONOMOUS) VUYYURU A.P  
(Accredited at "A" level by NAAC, Bengaluru)



Department of Mathematics

CERTIFICATE COURSE: BUSINESS COMPUTATION

CERTIFICATE

This is to Certify that Ayasha Siddhikha Son/Daughter of Shri/Smt Md. Khajjar has  
Successfully completed value added course in **Business computation** Conducted by the Department of mathemaiticks from 02-11-2021  
to 30-11-2021 We wish him her bright future .

  
Co-ordinator

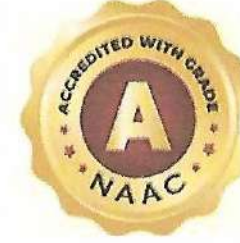
  
Head of Department

  
Principal

Adusumilli Gopalakrishnaiah & Sugarcane Growers  
Siddhartha Degree College of Arts & Science,  
Vuyyuru-521 163, Krishna District.



ADUSUMILLI GOPALAKRISHNAIAH AND SUGARCANE GROWERS  
SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE,  
(AUTONOMOUS) VUYYURU A.P  
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Department of Mathematics

CERTIFICATE COURSE: BUSINESS COMPUTATION

CERTIFICATE

This is to Certify that A. Tejaswini Son/Daughter of Shri/Smt A. Ramesh has  
Successfully completed value added course in **Business computation** Conducted by the Department of **mathematicks** from 02-11-2021  
to 30-11-2021 We wish him her bright future .

  
Co-ordinator

  
Head of Department

  
Principal  
Adusumilli Gopalakrishnaiah & Sugarcane Growers  
Siddhartha Degree College of Arts & Science,  
Vuyyuru-521 165, Krishna District.



Adusumilli Gopalakrishnaiah & Sugarcane Growers  
Siddhartha Degree College of Arts and Science

**AUTONOMOUS COLLEGE**

**NAAC 'A' Grade College**

Vuyyuru, Krishna (Dt.), Andhra Pradesh-521165

## **VALUE ADDED COURSE**

**TITLE: AGRIBUSINESS ENVIRONMENT IN ANDHRAPRADESH**

**VAC CODE: ECO-AEAP-04**

**On 16<sup>th</sup> Nov, 2021 TO 30<sup>th</sup> Dec 2021**

**Duration of the Course: 30 Days**

**Organized By**

**Department of ECONOMICS**



**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh  
(Managed by: Siddhartha Academy of General & Technical Education, Vijayawada-10)  
An Autonomous College in the Jurisdiction of Krishna University  
Accredited by NAAC with "A" Grade ISO 9001:2015 Certified Institution



**DEPARTMENT OF ECONOMICS**

2021-2022

**Value Added Course**

**Title: AGRIBUSINESS ENVIRONMENT IN ANDHRA PRADESH**

Name of the Lecturer	:	NAGADESI RAMA RAO
Class	:	I B.A.
Duration of the Course	:	30 HOURS
VAC Code	:	ECO-AEAP-04



3

**A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**

**Title: AGRIBUSINESS ENVIRONMENT IN ANDHRA  
PRADESH**

- Objectives
1. Creation of statewide agricultural produce marketing infrastructure, comprising of various market yards, purchase centers, link roads etc.
  2. Profit maximization for farmers by ensuring best-possible prices for their produce at the various market yards, sub yards and purchase centers.
  3. Regulation and administration of various Market Committees all across the state as per the Punjab Agricultural Produce Markets Act, 1961.
  4. Collection of Market Fee and other levies from the purchasers on various transactions taking place at the Mandis.

Methodology : Teacher - Centered method

Duration : 30 Hours



**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**  
**Student Enrolment Sheet**

Class : I B.A

S. No	Roll No.	Name of the Student	Signature
1	2111001	U. Ashok kumar	v. Ashok kumar
2	2111002	K. Ajay kumar	K. Ajay kumar
3	2111004	I. Raja Babu	I. Raja babu
4	2111008	Keddy Raju	R. Reddy
5	211110	U. chandra Teja	V. Ch. Teja
6	2111012	K. Aditya	K. Aditya
7	2111016	P. Pujitha	p. pujitha
8	2111017	P. S. V. Sukanya	p. s. v. sukanya
9	2111019	T. Neelima	T. Neelima.
10	2111022	S. kavya	S. kavya
11	2111023	M. Prasanthi	M. Prasanthi
12	2111024	B. Prashanthi	B. Prashanthi
13	2111026	D. Durgadevi	D. Durgadevi
14	2111027	K. Halalaya	k. halalaya
15	2111031	B. Vinu	B. Vinu.

*N. Tanu Rao*  
Head, Department of Economics  
A.G. & S.G. Siddhartha Degree College  
(Autonomous), VUYURU - 521 165

*Chaitra*  
PRINCIPAL  
AG & SG Siddhartha Degree College of  
Arts & Science (Autonomous), Vuyyuru



**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**

**Title: AGRIBUSINESS ENVIRONMENT IN ANDHRA PRADESH**

Date From:16-11-2021 TO 30-12-2021

Date	Content	Module No.
16/11/21 to 24/11/21	Overview of Agribusiness: Introduction to agribusiness, its components, and the role of agribusiness in the economy.	I
27/11/21 to 11/12/21	Agriculture in Andhra Pradesh: An overview of the agricultural sector in Andhra Pradesh, including key crops, livestock, and fisheries. Understanding the contribution of agriculture to the state's economy and employment.	II
14/12/21 to 29/12/21	Examination of government policies and programs that influence the agribusiness environment in Andhra Pradesh. This includes analysis of subsidies, agricultural credit, insurance schemes, and market regulations.	III
21/12/21 to 30/12/21	Agri-input and Output Markets: Study of agri-input markets, such as seeds, fertilizers, and pesticides, and output markets for agricultural produce. Understanding the marketing channels, supply chain dynamics, pricing mechanisms, and challenges in these markets.	IV

## SYLLABUS

### 1. Introduction to Agribusiness:

- Definition and scope of agribusiness
- Importance of agribusiness in the global economy
- Historical development of agribusiness

### 2. Agricultural Production Systems:

- Types of agricultural production systems
- Crop production methods and technologies
- Livestock production methods and technologies
- Sustainable agriculture practices

### 3. Agribusiness Value Chain:

- Understanding the agribusiness value chain
- Key players in the agribusiness value chain (farmers, processors, distributors, retailers, etc.)
- Factors influencing the agribusiness value chain

### 4. Agricultural Markets and Marketing:

- Agricultural marketing channels
- Market structures and pricing mechanisms
- Market information systems
- Market segmentation and targeting

### 5. Agribusiness Finance and Risk Management:

- Financial management in agribusiness
- Sources of agribusiness financing

- Risk management strategies in agribusiness

#### 6. Agribusiness Policy and Regulation:

- Agricultural policies and their impact on agribusiness
- Government regulations and agricultural trade
- Environmental and sustainability regulations in agribusiness

#### 7. Global Agribusiness Environment:

- International trade in agricultural products
- Global trends in agribusiness
- Challenges and opportunities in the global agribusiness arena

#### 8. Technology and Innovation in Agribusiness:

- Role of technology in modern agribusiness
- Precision agriculture and IoT applications
- Emerging trends and innovations in agribusiness

#### 9. Sustainable Agribusiness Practices:

- Sustainable agriculture and responsible resource management
- Environmental stewardship in agribusiness
- Social and ethical considerations in agribusiness

#### 10. Agribusiness Case Studies:

- Analysis of real-world agribusiness cases
- Learning from successful and failed agribusiness ventures
- Applying concepts and theories to practical situations

#### 11. Agribusiness and Entrepreneurship:

- Entrepreneurship opportunities in agribusiness
- Creating and managing a successful agribusiness venture
- Business planning and feasibility analysis

#### 12. Future Trends in Agribusiness:

- Anticipating future challenges and opportunities
- Technological advancements and their impact on agribusiness
- Sustainable practices for the future of agribusiness

Please note that this outline is a general overview and may not cover all topics that could be included in an Agribusiness Environment syllabus. It is always best to refer to the specific syllabus provided by your educational institution for the most accurate and up-to-date information.

## Unit-1

Agribusiness is a broad term that refers to the various activities and sectors involved in the production, processing, distribution, and marketing of agricultural products and services. It encompasses a wide range of activities and businesses related to agriculture, including farming, food production, and the supply chain that brings agricultural products from farms to consumers. Here are some key aspects and components of agribusiness:

1. **Farming:** This is the core of agribusiness, where agricultural products are grown or raised. It includes crop farming (such as growing grains, fruits, and vegetables) and livestock farming (raising animals for meat, dairy, and other products).
2. **Agrochemicals:** The production and sale of agricultural chemicals like fertilizers, pesticides, and herbicides that help increase crop yields and protect crops from pests and diseases.
3. **Agricultural Machinery:** The manufacturing and distribution of farm equipment and machinery like tractors, harvesters, and irrigation systems that enhance efficiency and productivity on farms.
4. **Food Processing:** The transformation of raw agricultural products into processed food items such as packaged foods, beverages, and other value-added products. Food processing companies are a crucial part of agribusiness.
5. **Distribution and Logistics:** The transportation and distribution of agricultural products from farms to processing facilities, distribution centers, and ultimately to consumers. This involves transportation, warehousing, and supply chain management.
6. **Retail and Marketing:** The sale of agricultural products to consumers through various retail outlets, including supermarkets, farmers' markets, and online stores. Marketing strategies play a significant role in promoting and selling agricultural products.
7. **Agri-Finance:** Financial services tailored to the agricultural sector, including loans, insurance, and investment opportunities for farmers and agribusinesses.
8. **Research and Development:** Investment in research and development to improve crop varieties, develop new farming techniques, and address environmental and sustainability issues in agriculture.
9. **Agribusiness Consulting:** Consulting services that help farmers and agribusinesses with business planning, market analysis, and strategic decision-making.
10. **Agri-Tech:** The use of technology, including precision agriculture, drones, sensors, and data analytics, to improve the efficiency and sustainability of agricultural practices.
11. **Agri-Tourism:** Combining agriculture with tourism, offering activities like farm tours, farm stays, and agritourism experiences to generate additional income for farmers.
12. **Agri-Export:** The export of agricultural products to international markets, which is a significant component of agribusiness for many countries.

Agribusiness is a crucial part of the global economy, as it provides food, fiber, and other essential products for the world's population. It is also influenced by various factors such as government policies, climate conditions, consumer preferences, and technological advancements. Sustainability and environmental considerations are becoming increasingly important in the agribusiness sector due to concerns about the long-term impact of agriculture on the planet.

## Unit-2

As of my last knowledge update in September 2021, I can provide you with an overview of agriculture in Andhra Pradesh, India. Please note that the information may have changed since then, and I recommend checking the latest reports and data for the most up-to-date information.

## Agriculture in Andhra Pradesh:

1. **Crop Diversity:** Andhra Pradesh is known for its diverse agriculture. It produces a wide range of crops, including rice, maize, sorghum, pearl millet, pulses, oilseeds, sugarcane, cotton, tobacco, and various fruits and vegetables.
2. **Rice Production:** Rice is the staple food crop of Andhra Pradesh, and it is cultivated in both the coastal regions and the interior parts of the state. Varieties like Sona Masuri and BPT 5204 are popular.
3. **Horticulture:** The state is a major producer of horticultural crops such as mangoes, bananas, guavas, and papayas. The Chittoor district, in particular, is famous for its mango production.
4. **Irrigation:** Irrigation plays a vital role in agriculture in Andhra Pradesh. The state has a well-developed irrigation infrastructure, including large reservoirs, canals, and tanks. Projects like the Polavaram Irrigation Project aim to further enhance irrigation facilities.
5. **Agricultural Practices:** Traditional and modern farming practices are both prevalent. While traditional methods are still used, there is a growing adoption of modern agricultural techniques, including the use of hybrid seeds, organic farming, and drip irrigation.
6. **Agricultural Challenges:** Andhra Pradesh faces challenges such as water scarcity, soil degradation, and fluctuations in weather patterns. Climate change impacts, like droughts and floods, can have adverse effects on crop yields.
7. **Government Initiatives:** The government of Andhra Pradesh has implemented various initiatives to support farmers, including financial assistance, subsidies for seeds and fertilizers, and crop insurance programs. The state has also promoted organic farming and the use of technology in agriculture.
8. **Agro-Processing:** There is a growing focus on agro-processing industries in the state. Food processing units for rice, fruits, and vegetables are being developed, which adds value to agricultural produce and generates employment.
9. **Exports:** Andhra Pradesh exports agricultural products such as rice, marine products, and spices to both national and international markets. The state's coastal location facilitates marine product exports.
10. **Agricultural Universities:** Andhra Pradesh is home to several agricultural universities and research institutions that work on improving agricultural practices and developing new crop varieties suited to the region.



## UNIT-3

Government policies and programs are tools that governments use to address various issues, meet societal needs, and achieve specific goals. These policies and programs can encompass a wide range of areas, including economic development, social welfare, healthcare, education, environmental conservation, and more. Here, I'll provide a general overview of government policies and programs, highlighting some common examples:

### 1. Economic Policies and Programs:

- **Monetary Policy:** Set by central banks to control money supply, interest rates, and inflation.
- **Fiscal Policy:** Involves government taxation and spending to influence economic growth and stability.
- **Industrial and Trade Policies:** Strategies to promote specific industries, international trade, and economic growth.
- **Employment Programs:** Initiatives to reduce unemployment rates through job creation and training.

### 2. Social Welfare Policies and Programs:

- **Social Security:** Programs that provide financial support to individuals in times of need, such as unemployment benefits and disability assistance.
- **Healthcare Programs:** Public healthcare systems, insurance programs, and initiatives to improve healthcare access and affordability.
- **Education Programs:** Public education systems, scholarships, and initiatives to improve educational quality and access.
- **Housing Programs:** Affordable housing initiatives and assistance for low-income individuals and families.

### 3. Environmental Policies and Programs:

- **Environmental Regulations:** Laws and regulations to protect natural resources, air and water quality, and wildlife.
- **Conservation Programs:** Initiatives to preserve and restore ecosystems and biodiversity.
- **Renewable Energy Policies:** Incentives and regulations to promote the use of clean energy sources like solar and wind power.

### 4. Infrastructure Development Programs:

- **Transportation Infrastructure:** Projects to improve roads, bridges, public transit, and airports.
- **Energy Infrastructure:** Initiatives to expand and modernize energy grids and utilities.

- **Digital Infrastructure:** Broadband internet expansion and technology development programs.

#### 5. Foreign Policy and International Relations:

- **Trade Agreements:** Bilateral and multilateral trade agreements to facilitate international trade.
- **Aid and Development Programs:** Assistance to other countries for development and humanitarian purposes.
- **Diplomacy and Peace Initiatives:** Efforts to promote international peace and resolve conflicts.

#### 6. Criminal Justice and Public Safety:

- **Law Enforcement:** Policing strategies and crime prevention programs.
- **Prison and Rehabilitation Programs:** Corrections policies and initiatives to reduce recidivism.
- **Emergency Management:** Disaster preparedness and response efforts.

#### 7. Social and Cultural Policies:

- **Cultural Preservation:** Programs to protect and promote cultural heritage and arts.
- **Gender and Social Inclusion:** Initiatives to address issues related to gender, race, and social equity.
- **Youth and Sports Programs:** Efforts to engage young people and promote sports and recreation.

#### 8. Rural Development and Agriculture:

- **Agricultural Subsidies:** Support for farmers, including subsidies and price support.
- **Rural Infrastructure:** Initiatives to improve rural roads, electricity, and access to markets.

Government policies and programs can vary significantly from one country to another, depending on the country's priorities, political ideology, and economic conditions. These policies and programs are typically developed, implemented, and monitored by government agencies and departments in collaboration with relevant stakeholders and experts.

## UNIT -4

The agricultural input and output markets are essential components of the agricultural sector, playing a crucial role in the production, distribution, and consumption of agricultural products. Here's an overview of these markets:

### 1. Agricultural Input Markets:

Agricultural input markets deal with the goods and services that farmers require to cultivate crops and raise livestock. These inputs are essential for the production process and include:

- a. Seeds:** Farmers purchase seeds of various crop varieties, including hybrid and genetically modified seeds, to plant their fields. These seeds are selected for their yield potential, disease resistance, and other traits.
- b. Fertilizers:** Fertilizers are substances applied to soil or crops to provide essential nutrients like nitrogen, phosphorus, and potassium. They enhance soil fertility and crop growth.
- c. Pesticides and Herbicides:** These chemical compounds are used to protect crops from pests, insects, diseases, and weeds, ensuring healthier and more productive plants.
- d. Farm Machinery and Equipment:** This includes tractors, plows, harvesters, irrigation systems, and other tools used in farming operations. Modern machinery can significantly increase efficiency and productivity.
- e. Labor and Human Capital:** Skilled labor and expertise in agricultural practices are crucial inputs. Farm workers, agronomists, and other professionals contribute to successful crop and livestock management.
- f. Technology and Information:** Access to information, weather forecasts, market data, and technology like GPS and farm management software can enhance decision-making and productivity.
- g. Finance and Credit:** Many farmers rely on loans and credit to finance their operations, purchase inputs, and manage cash flow throughout the growing season.

### 2. Agricultural Output Markets:

Agricultural output markets involve the sale and distribution of agricultural products, including crops, livestock, and their by-products. These markets are interconnected with various stakeholders:

- a. Crop Markets:** Farmers sell their harvested crops such as grains, fruits, vegetables, and oilseeds in crop markets. These products are then used for food production, animal feed, and other industrial purposes.
- b. Livestock and Poultry Markets:** Livestock farmers sell animals like cattle, poultry, pigs, and sheep, as well as dairy and meat products.
- c. Agri-Processing and Food Industry:** Many agricultural products are processed into food items, beverages, and other consumer goods. This sector includes food processing companies that transform raw agricultural materials into market-ready products.
- d. Export Markets:** Agricultural products often find international markets. Exports can include grains, fruits, vegetables, meat, and other commodities, contributing to a country's economy.

**e. Retail Markets:** Agricultural products are sold to consumers through various retail channels, such as supermarkets, grocery stores, farmers' markets, and online platforms.

**f. Commodities Markets:** Some agricultural products are traded on commodities exchanges, where futures contracts are bought and sold. These markets help manage price risk for both producers and buyers.

The efficiency and performance of these input and output markets are critical for the sustainability and profitability of the agricultural sector. Government policies, infrastructure development, technology adoption, and market access play significant roles in shaping these markets, ensuring that farmers have access to the necessary inputs and can sell their products at fair prices. Moreover, sustainability and environmental considerations are increasingly influencing both input and output markets, with a growing emphasis on sustainable agricultural practices and responsible consumption.

**Value Added Course**  
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**PRADESH**

2111024 - B. Prashanthi

08  
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10

**Test Exercise:**

1. In case of elastic demand, an increase in price will –  
A. Lead to decrease in total Revenue.
2. Which of the following is not a capital outflow?  
A. Receipt of loans from (or) from abroad.
3. What has to be subtracted from gross investment to obtain net investment? A. Depreciation.
4. An indirect instrument of monetary policy is –  
A. Open Market Operations.
5. One of the following is not a component of foreign exchange reserves in India – A. Foreign exchange assets of RBI.
6. Who fixes the REPO rate in India?  
A. RBI - Reserve Bank of India.
7. Which one of the following does not influence the quantity demanded for a good? A. Good's Own price.
8. Which one of the following would be considered Foreign Direct Investment? A. Demand. X
9. Which one of the following best describes BRICS? A. Monopoly. X
10. Which one of the following items is not covered under GST? A. Petrol.

B. Prashanthi

B. Vinnu

N. Ramasao  
Head, Department of Economics  
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Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**  
**Title: AGRIBUSINESS ENVIRONMENT IN ANDHRA**  
**PRADESH**

**Key:**

1. lead to decrease in total revenue
2. Receipt of loans from abroad
3. Depreciation
4. Open market operations
5. Foreign exchange assets of RBI
6. RBI - Reserve Bank of India
7. Good's own price
8. A foreign entity setting up an educational institution in India
9. A group of five major emerging economies
  
10. Petrol

8

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**Department of ECONOMICS**

**Value Added Course**

**Title: AGRIBUSINESS ENVIRONMENT IN ANDHRA  
PRADESH**

**Marks List**

Class: I BA

S. No	Roll No.	Name of the Student	Marks
1	2111001	U. Ashok kumar	8/10
2	2111002	K. Ajay kumar	7/10
3	2111004	T. Raja Babu	8/10
4	2111008	Keddy Raju	7/10
5	211110	U. Chandra Teja	8/10
6	2111012	K. Aditya	7/10
7	2111016	P. Pujitha	7/10
8	2111017	P. S. U. Sukanya.	8/10
9	2111019	T. Neelima.	7/10
10	2111022	S. Kavya	7/10
11	2111023	M. Prasanthi	7/10
12	2111024	B. Prasanthi	8/10
13	2111027	K. Halleluya	8/10
14	2111028	D. Durga Devi	8/10
15	2111031	B. Vinu	7/10

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**Department of ECONOMICS**

**Value Added Course**

**Title: AGRIBUSINESS ENVIRONMENT IN ANDHRA  
PRADESH**

**Title:** \_\_\_\_\_

**Feed Back Form**

*B. Prashanthi*

1. Is the programme interested to you  (Yes/No)
2. Have you attended all the session  (Yes/No)
3. Is the content of the program is adequate  (Yes/No)
4. Have the teacher covered the entire syllabus?  (Yes/No)
5. Is the number of hours adequate?  (Yes/No)
6. Do you have any suggestions for enhancing or reducing the number of weeks designed for the program?  (Yes/No)
7. On the whole, is the program useful in terms of enriching your knowledge?  (Yes/No)
8. Do you have any suggestions on the program?  (Yes/No)

*B. Prashanthi*



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Vuyyuru-521165, Krishna District, Andhra Pradesh

## Value Added Course / Certificate Course - Attendance Register

Class / Section: IBA

Year : 2021-22

Department of: Economics

Paper: Bridge course

Lecturer: N. RAMA RAO

Sl. No	Roll No	Student Name	Category	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
1	2111001	V. Ashok kumar	BC-B	P	P	P	P	P	P	A	P	P	P	A	P	P	P	P	14
2	2111002	K. Ajay kumar	BC-B	P	P	P	P	A	P	P	P	A	P	P	P	P	P	P	13
3	2111004	J. Raja Babu	BC-D	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	14
4	2111008	R. Raju	BC-D	P	P	P	P	P	A	P	P	P	P	P	P	A	P	P	13
5	2111010	V. Chandra Teja	BC-A	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	14
6	2111012	K. Aditya	BC-A	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	14
7	2111016	P. Pujitha	DC	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	14
8	2111017	P. S. V. Sukanya	BC-D	P	P	P	P	P	P	A	P	P	P	P	A	P	P	P	13
9	2111019	T. Neelima	SC	P	P	P	A	P	P	P	P	A	P	P	P	P	A	P	12
10	2111022	S. Kavya	BC-B	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	14
11	2111023	M. prasanthi	BC-B	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	14
12	2111024	B. prashanthi	DC	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	13
13	2111025	D. Durga Devi	BC-A	P	P	P	A	P	P	P	P	A	P	P	P	P	A	P	12
14	2111027	K. Halleluza	SC	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	13
15	2111031	B. Vinnu	SC	P	P	P	P	P	P	A	P	P	P	A	P	P	P	P	13

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# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Value Added Course / Certificate Course - Attendance Register

s / Section: IBA

Year : 2021-22 Department of: Economics

Paper: Bridge Course Lecturer: N. RAMA RAO

Roll No	Student Name	Category	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
001	V. Ashok kumar	BC-B	P	P	P	P	P	P	A	P	P	P	P	A	P	P	P	13
1002	K. Ajay kumar	BC-B	P	P	P	P	A	P	P	P	P	A	P	P	P	P	P	13
004	T. Raja Babu	BC-D	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	14
1008	R. Raju	BC-D	P	P	P	P	P	P	A	P	P	P	P	P	P	A	P	13
1010	V. chandra Teja	BC-A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	14
1012	K. Aditya	BC-A	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	13
1016	P. pujiatha	OC	P	P	P	P	P	P	P	A	P	P	P	P	P	A	P	13
1017	P. S. U. Sukanya	BC-D	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	14
1019	T. Neelima	SC	P	P	P	A	P	P	P	P	A	P	P	P	P	P	P	13
1022	S. kavya	BC-B	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	13
1023	M. prashanthi	BC-B	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	14
1024	B. prashanthi	DC	P	P	P	P	P	A	P	P	P	P	P	P	A	P	P	13
1026	D. Durga Devi	BC-A	P	P	P	A	P	P	P	P	P	A	P	P	P	P	P	13
1027	K. Halleluza	SC	P	P	P	P	P	P	A	P	P	P	P	P	A	P	P	13
1031	B. Vinu.	SC	P	P	P	P	P	P	P	A	P	P	P	A	P	P	A	12

Department of Economics  
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**Department of Economics**

**VALUE ADDED COURSE: AGRIBUSINESS ENVIRONMENT IN ANDHRA PRADESH**

**CERTIFICATE**

This is to Certify that. **B. PRASANTHI.** Son/Daughter of Shri/Smt **B-Durga PRASAD.**

has Successfully completed value added course in **AGRIBUSINESS ENVIRONMENT IN ANDHRA PRADESH**  
Conducted by the Department of Economics from 16-11-2021 to 30-12-2021 We wish him her bright future

*N. Ramana*  
**Co-ordinator**

*N. Ramana*  
**Head of Department**

*Chave*  
**Principal**  
PRINCIPAL  
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Arts&Science (Autonomous), Vuyyuru



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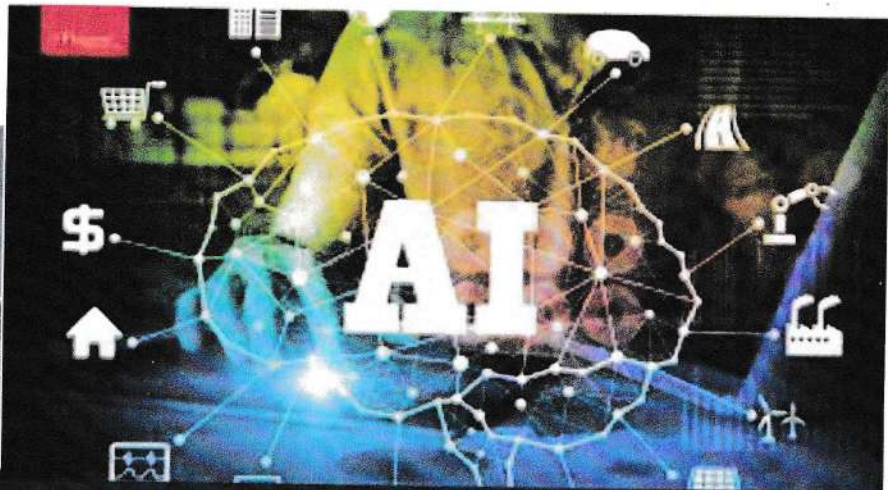
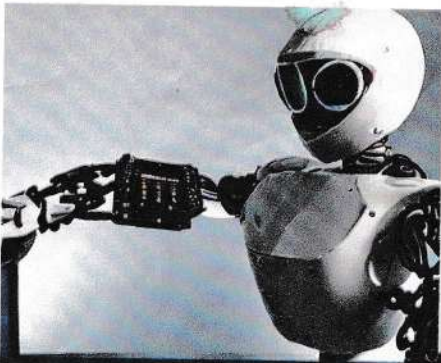


**VAD COURSE :ARTIFICIAL INTELIENCE**

**VAC CODE:AIVAC101**


**CLASS :IIBSc(MPCs)**


**DURATION :30 DAYS**



**DEPARTEMENT OF  
COMPUTER SCIENCE**

**Contact**

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# **A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

(Managed by: Siddhartha Academy of General & Technical Education, Vijayawada-10)

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## **DEPARTMENT OF** COMPUTER SCIENCE

### **Value Added Course Title: ARTIFICIAL INTELLIGENCE**

Name of the Lecturer	:	Gona Katyayini
Class	:	II MPC's
Duration of the Course	:	30 HOURS
VAC Code	:	AIVAC101

# **A.G. & S.G. Siddhartha Degree College of Arts & Science**

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## **Value Added Course**

**Title: ARTIFICIAL INTELLIGENCE**

- Objectives : 1) Achieve the objectives of company XX by 20202
- 2) Boost organizational Performance at all levels
- 3) Use an integrated smart digital system that can overcome challenges and provide quick efficient solution.
- 4) Make company XX the first in the field of AI investments various sectors

Methodology : Teacher-Centered method

Duration : 30 Hours

# **A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

## **Value Added Course**

**Title: ARTIFICIAL INTELLIGENCE**

**Date**      **From 18/11/2021**                      **to**      **12/01/2022**

Date	Content	Module No.
18/11/21	<b><u>INTRODUCTION TO AI AND PRODUCTION SYSTEMS</u></b> Introduction to AI-Problem formulation, Control strategies, Search strategies, Problem characteristics,	I
01/12/21	<b><u>REPRESENTATION OF KNOWLEDGE</u></b> Game playing Knowledge representation, Knowledge representation using Predicate logic, Introduction to predicate calculus, Use of predicate calculus	II
10/12/21	<b><u>KNOWLEDGE INFERENCE</u></b> Knowledge representation -Production based system, Frame based system. Inference - Backward chaining, Forward chaining	III
04/01/22	<b><u>PLANNING AND MACHINE LEARNING</u></b> Basic plan generation systems , Advanced plan generation systems ,K strips ,Strategic explanations	IV

# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Value Added Course Student Enrolment Sheet


Class :II MPC's

S. No	Roll No.	Name of the Student	Signature
1	20.601	Chillimuntha Lokesh	C. Lokesh
2	20.602	Loya Naga Padma	L.N. Padma
3	20.604	Pulipaka Chakradhar	P. chakradhar
4	20.605	Alaparathi Kumar Venkata Sai Kiran	A.Kov. Saikiran
5	20.606	Elusuri Poojitha	E. Poojitha
6	20.607	Rebba Bhanu Sree	R. Bhanu sree
7	20.608	Busi Manjusha	B. Manjusha
8	20.609	Gopalajoshula Prathyusha	G. Prathyusha
9	20.610	Kolluri Likitha	K. Likitha
10	20.611	Kurapati Harika	K. Harika
11	20.612	Goriparthi Sampurna	G. Sampurna
12	20.613	Kolli Naga Tirumala Reddy	K. naga tirumalareddy
13	20.614	Namala V V Sandhya	N V V sandhya
14	20.615	Tumuluri Yogambika	T. Yogambika
15	20.616	Arilli Veeramma	A. Veeramma
16	20.617	Gangireddy Jahnvi	G. Jahnvi



17	20.618	Katta Pravallika	K. Pravallika
18	20.619	Kagitha Hinduja	K. Hinduja
19	20.620	Ede Sravani Durga Devi	E.S.D. Devi
20	20.621	Munipalli Ajay	M. Ajay
21	20.622	Dasari Naga Mallika	D. Naga mallika
22	20.624	Juvvanapudi Sai Kiran	J. Sai Kiran
23	20.625	Taviti Ratna Kumari	T. Ratnakumari
24	20.626	Parimi Prem Chand	P. Prem chand
25	20.628	Shaik Sabiha Tasleem	So sabiha Taleem
26	20.629	Vasadi Radha	V. Radha.
27	20.630	Chittibomma Poorna Chandra Moulika	Ch.P.C. Moulika
28	20.631	Dokku Gnana Prasanna	D. Gnana prasanna
29	20.633	Dabbada Sai	D. Sai
30	20.634	Mareedu Aliveni	M. Aliveni

  
Signature of Lecturer

  
Signature of HOD

  
PRINCIPAL  
AG & Science (Autonomous), Vuyyuru

# ARTIFICIAL INTELLIGENCE

## UNIT-1:

### **Introduction to AI and production system**

#### ➤ **Introduction to AI - problem formulation**

Problem formation is the step in problem definition that is used to understand and decide a course of action that needs to be considered to achieve a goal. If there is more than one way an agent can reach its goal, then it causes complexity in terms of actually achieving the goal as there would be too many steps and paths that the AI entity can take to reach the goal that it causes confusion and a massive drop in the efficiency at the same time. Problem formulation can be done in many steps such as the definition of the initial state of the agent, determining possible actions that the agent can take, creation of transition models to describe the actions of the agent. Testing the goal and determining the path cost function are also important complements in determining the problem formulation approach.

#### **Cases involving Artificial Intelligence Issues**

Artificial intelligence is being used by programmers all around the world to automate systems for effective both resource and time management. Games and puzzles can pose some of the most frequent issues in daily life. The use of ai algorithms may effectively tackle this. Various problem-solving methods are implemented to create solutions for a variety complex puzzles, includes mathematics challenges such crypto-arithmetic and magic squares, logical puzzles including Boolean formulae as well as N-Queens, and quite well games like Sudoku and Chess. Therefore, these below represent some of the most common issues that artificial intelligence has remedied:

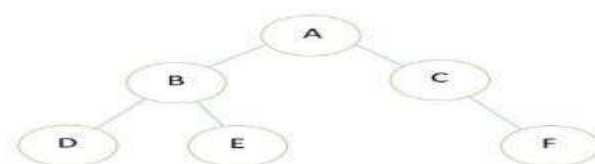
- Chess
- N-Queen problem
- Tower of Hanoi Problem
- Travelling Salesman Problem
- Water-Jug Problem

#### ➤ **Control strategies**

Control Strategy in Artificial Intelligence scenario is a technique or strategy, tells us about which rule has to be applied next while searching for the solution of a problem within problem space. It helps us to decide which rule has to apply next without getting stuck at any point. These rules decide the way we approach the problem and how quickly it is solved and even whether a problem is finally solved.

Control Strategy helps to find the solution when there is more than one rule or fewer rules for finding the solution at each point in problem space. A good Control strategy has two main characteristics:

Examples:



**Breadth-First Search:** It searches along the breadth and follows first-in-first-out queue data structure approach. It will start to scan node A first and then B-C-D-E-F.

**Depth-First Search:** It searches along the depth and follows the stack approach. The sequence for scanning nodes will be A-B-D-E-C-F, it scans all the sub-nodes of parent nodes and then moves to another node.

Widely used Control Strategies are Breadth-First Search, Depth-First Search, Generate and Test, Hill-Climbing, Best-first search, Problem Reduction and many more.

### ➤ Search strategies

What are search strategies in AI?

- Breadth-First Search. ...
- Depth-First Search. ...
- Bidirectional Search. ...
- Uniform Cost Search. ...
- Iterative Deepening Depth-First Search. ...
- Comparison of Various Algorithms Complexities. ...
- Heuristic Evaluation Functions. ...
- Pure Heuristic Search.

### Informed Search Strategy

- **Informed search strategy further includes two searching techniques. These are:**
  1. **A\* Search Technique.**
  2. **AO\* Search Technique.**

### A\* Search Technique

- **A\* search technique is an informal search strategy but can be called as a form of best first search.**
- **It is a search technique which the most optimistic node is expanded by expanding a graph.**
- **The node of the graph can be evaluated by using two functions i.e.  $g(n)$  and  $h(n)$ .**

Here,

$g(n)$  = **Cost/Distance to reach node “n”.**

$h(n)$  = **Cost/Distance to reach from node “n” to the goal node.**

- **For evaluating any node, function  $f(n)$  is generated and used as:**

$f(n) = g(n) + h(n)$ .

where,

$f(n)$  = **Estimated cost/distance of solution through node “n”.**

### Un-Informed Search Strategy

- **Un-Informed search strategy further includes two techniques. These are:**
  1. **Breadth First Search.**
  2. **Depth First Search.**

➤ **Problem characteristics**

Problem characteristics in AI refers to finding an optimal way and a good solution to characterize the problem. In addition, problem solving is one of the key concerns in AI. Certainly, we know AI is a vast field and branch of computer science, there can be complex problems to solve.

Let us take a look at some of the major problem characteristics.



**MAJOR PROBLEM CHARACTERISTICS**

Firstly, we need to know if the problem is decomposable or not. For instance, block world problem or Tower of Hanoi are easily decomposable. In Tower of Hanoi some rules are define to move the disks from source to destination. Moreover, each movement is divided into steps.

Secondly, problem is categorize into following:

- Ignorable
- Recoverable
- Irrecoverable

Ignorable problems are those which can be solved using simple control structure. For instance, mathematical problems.Recoverable problems are those where we can use backtracking to solve the problem. For instance 8-puzzle problem.

**PROBLEM CHARACTERISTICS STEPS**

- Define the problem precisely.
- Give the initial input required.
- Apply knowledge
- Choose best optimal technique for problem solving.

## UNIT-2:

### REPRESENTATION OF KNOWLEDGE

#### ➤ **Game playing knowledge representation**

Game Playing is an important domain of artificial intelligence. Games don't require much knowledge; the only knowledge we need to provide is the rules, legal moves and the conditions of winning or losing the game. Both players try to win the game. So, both of them try to make the best move possible at each turn. Searching techniques like BFS(Breadth First Search) are not accurate for this as the branching factor is very high, so searching will take a lot of time. So, we need another search procedures that improve –

- **Generate procedure** so that only good moves are generated.
- **Test procedure** so that the best move can be explored first.

Game playing is a popular application of artificial intelligence that involves the development of computer programs to play games, such as chess, checkers, or Go. The goal of game playing in artificial intelligence is to develop algorithms that can learn how to play games and make decisions that will lead to winning outcomes.

1. One of the earliest examples of successful game playing AI is the chess program Deep Blue, developed by IBM, which defeated the world champion Garry Kasparov in 1997. Since then, AI has been applied to a wide range of games, including two-player games, multiplayer games, and video games.

There are two main approaches to game playing in AI, rule-based systems and machine learning-based systems.

1. **Rule-based systems** use a set of fixed rules to play the game.
2. **Machine learning-based systems** use algorithms to learn from experience and make decisions based on that experience.

In recent years, machine learning-based systems have become increasingly popular, as they are able to learn from experience and improve over time, making them well-suited for complex games such as Go. For example, AlphaGo, developed by DeepMind, was the first machine learning-based system to defeat a world champion in the game of Go.

#### **Advantages of Game Playing in Artificial Intelligence:**

1. **Advancement of AI:** Game playing has been a driving force behind the development of artificial intelligence and has led to the creation of new algorithms and techniques that can be applied to other areas of AI.
2. **Education and training:** Game playing can be used to teach AI techniques and algorithms to students and professionals, as well as to provide training for military and emergency response personnel.
3. **Research:** Game playing is an active area of research in AI and provides an opportunity to study and develop new techniques for decision-making and problem-solving.
4. **Real-world applications:** The techniques and algorithms developed for game playing can be applied to real-world applications, such as robotics, autonomous systems, and decision support systems.

## ➤ Knowledge representation using predicated logic

### Introduction

Predicate Logic in AI is fundamentally a method for describing and modifying assertions about objects and their characteristics. It includes a collection of rules and symbols that enable us to build complex statements from simpler ones.

Predicates and variables are the core components of Predicate Logic in AI. A predicate is an assertion made regarding one or more things. For instance, the predicate "is blue" declares that a specific item possesses the attribute of being blue. A variable serves as a stand-in for an object so that assertions can apply to any object of a particular type. We can generalize assertions about vehicles by using the variable  $x$  to represent any car, for instance. There must be at least one object (represented by the variable  $x$ ) with the quality of being blue, according to the adage "exists  $x$ ,  $x$  is blue".

### Characteristics of Predicate Logic

Predicate Logic in AI has several characteristics that make it a powerful tool for AI applications. Some of these characteristics are:

- The Logical inference is allowed.
- More accurate knowledge representation of facts of the real world.
- Program designing is its application area.
- Better theoretical foundation.
- A predicate with no variable is called a Ground Atom.

## ➤ Introduction to predicated calculus

**predicate calculus**, also called **Logic Of Quantifiers**, that part of modern formal or symbolic logic which systematically exhibits the logical relations between sentences that hold purely in virtue of the manner in which **predicates** or noun expressions are distributed through ranges of subjects by means of quantifiers such as "all" and "some" without regard to the meanings or **conceptual** contents of any predicates in particular. Such predicates can include both qualities and relations; and, in a higher-order form called the functional calculus, it also includes functions, which are "framework" expressions with one or with several variables that acquire definite truth-values only when the variables are replaced by specific terms. The **predicate** calculus is to be distinguished from the propositional calculus, which deals with unanalyzed whole propositions related by connectives (such as "and," "if . . . then," and "or").

The traditional **sylogism** is the most well-known sample of predicate **logic**, though it does not exhaust the subject. In such arguments as "All C are B and no B are A, so no C are A," the **truth** of the two **premises** requires the truth of the conclusion in virtue of the manner in which the predicates B and A are distributed with reference to the classes specified by C and B, respectively. If, for example, the predicate A belonged to only one of the B's, the conclusion then could possibly be false—some C could be an A.



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### [formal logic: The predicate calculus](#)

Modern [symbolic logic](#), of which the predicate calculus is a part, does not restrict itself, however, to the traditional [syllogistic](#) forms or to their symbolisms, a very large number of which have been devised. The predicate calculus usually builds upon some form of the propositional calculus. It then proceeds to give a classification of the sentence types that it contains or deals with, by reference to the different manners in which predicates may be distributed within sentences. It distinguishes, for example, the following two types of sentences: "All  $F$ 's are either  $G$ 's or  $H$ 's," and "Some  $F$ 's are both  $G$ 's and  $H$ 's." The conditions of truth and falsity in the basic sentence types are determined, and then a cross-classification is made that groups the sentences formulable within the calculus into three mutually [exclusive](#) classes—(1) those sentences that are true on every possible specification of the meaning of their predicate signs, as with "Everything is  $F$  or is not  $F$ "; (2) those false on every such specification, as with "Something is  $F$  and not  $F$ "; and (3) those true on some specifications and false on others, as with "Something is  $F$  and is  $G$ ."

#### ➤ Use of predicate calculus

##### **Predicate**

A predicate is an expression of one or more variables defined on some specific domain. A predicate with variables can be made a proposition by either assigning a value to the variable or by quantifying the variable.

Consider the following statement.

Ram is a student.

Now consider the above statement in terms of Predicate calculus.

Here "is a student" is a predicate and Ram is subject.

Let's denote "Ram" as  $x$  and "is a student" as a predicate  $P$  then we can write the above statement as  $P(x)$ .

Generally a statement expressed by Predicate must have at least one object associated with Predicate. In our case, Ram is the required object with associated with predicate  $P$ .

##### **Well Formed Formula**

Well Formed Formula (wff) is a predicate holding any of the following –

All propositional constants and propositional variables are wffs

If  $x$  is a variable and  $Y$  is a wff,  $\forall x Y$  and  $\exists x Y$  are also wff

Truth value and false values are wffs

Each atomic formula is a wff

All connectives connecting wffs are wffs

### **Free and Bound variables**

Consider a Predicate formula having a part in form of  $(\exists x) P(x)$  or  $(x)P(x)$ , then such part is called x-bound part of the formula. Any occurrence of x in x-bound part is termed as bound occurrence and any occurrence of x which is not x-bound is termed as free occurrence. See the examples below -

$$(\exists x) (P(x) \wedge Q(x))$$

$$(\exists x) P(x) \wedge Q(x)$$

### **Universe of Discourse**

We can limit the class of individuals/objects used in a statement. Here limiting means confining the input variable to a set of particular individuals/objects. Such a restricted class is termed as Universe of Discourse/domain of individual or universe. See the example below:

Some cats are black.

$C(x)$  : x is a cat.

$B(x)$  : x is black.

$$(\exists x)(C(x) \wedge B(x))$$



## UNIT-3

### KNOWLEDGE INFERENCE

#### Knowledge representation -

##### ➤ Production based on system

What is Production System?

Production system or production rule system is a computer program typically used to provide some form of artificial intelligence, which consists primarily of a set of rules about behavior but it also includes the mechanism necessary to follow those rules as the system responds to states of the world.



#### Components of Production System

The major components of the Production System in Artificial Intelligence are:

- **Global Database:** The global database is the central data structure used by the production system in Artificial Intelligence.
- **Set of Production Rules:** The production rules operate on the global database. Each rule usually has a precondition that is either satisfied or not by the global database. If the precondition is satisfied, the rule is usually be applied. The application of the rule changes the database.
- **A Control System:** The control system then chooses which applicable rule should be applied and ceases computation when a termination condition on the database is satisfied. If multiple rules are to fire at the same time, the control system resolves the conflicts.

## Features of Production System in Artificial Intelligence

The main features of the production system include:

- 1. Simplicity:** The structure of each sentence in a production system is unique and uniform as they use the “IF-THEN” structure. This structure provides simplicity in knowledge representation. This feature of the production system improves the readability of production rules.
- 2. Modularity:** This means the production rule code the knowledge available in discrete pieces. Information can be treated as a collection of independent facts which may be added or deleted from the system with essentially no deleterious side effects.
- 3. Modifiability:** This means the facility for modifying rules. It allows the development of production rules in a skeletal form first and then it is accurate to suit a specific application.
- 4. Knowledge-intensive:** The knowledge base of the production system stores pure knowledge. This part does not contain any type of control or programming information. Each production rule is normally written as an English sentence; the problem of semantics is solved by the very structure of the representation.

### ➤ Frame based system

Frames provide a structure for representing knowledge that can be used by AI systems to reason about the world. They can also be used to store and retrieve information from memory, and to make inferences about new situations. Frames can also be used to represent plans and goals, and to generate new actions.

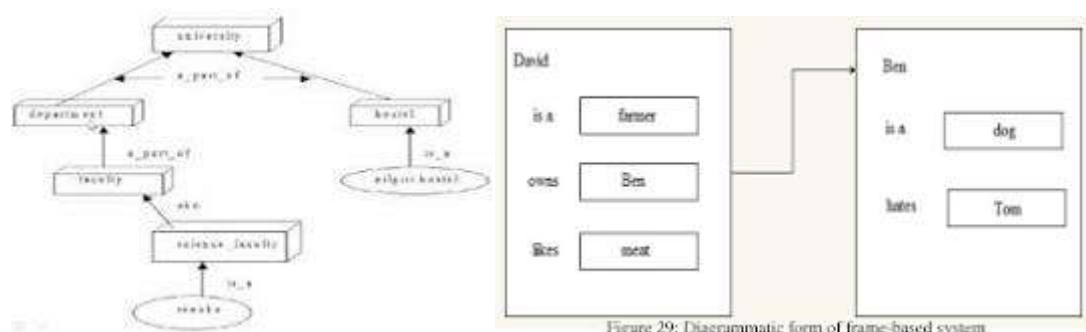


Figure 29: Diagrammatic form of frame-based system

The frame contains information on how to use the frame, what to expect next, and what to do when these expectations are not met. Some information in the frame is generally unchanged while other information, stored in "terminals", usually change. Terminals can be considered as variables. Top-level frames carry information, that is always true about the problem in hand, however, terminals do not have to be true. Their value might change with the new information encountered. Different frames may share the same terminals.

Each piece of information about a particular frame is held in a slot. The information can contain:

Facts or DataValues (called facets)

Procedures (also called procedural attachments)

- IF-NEEDED: deferred evaluation
- IF-ADDED: updates linked information

Default Values

- For Data
- For Procedures

### Features and advantages

---

A frame's terminals are already filled with default values, which is based on how the human mind works. For example, when a person is told "a boy kicks a ball", most people will visualize a particular ball (such as a familiar [soccer ball](#)) rather than imagining some abstract ball with no attributes.

One particular strength of frame-based knowledge representations is that, unlike semantic networks, they allow for exceptions in particular instances. This gives frames an amount of flexibility that allows representations of real-world phenomena to be reflected more accurately.

Like [semantic networks](#), frames can be queried using spreading activation. Following the rules of inheritance, any value given to a slot that is inherited by subframes will be updated (IF-ADDED) to the corresponding slots in the subframes and any new instances of a particular frame will feature that new value as the default.

Because frames are based on structures, it is possible to generate a semantic network given a set of frames even though it lacks explicit arcs. References to [Noam Chomsky](#) and his [generative grammar](#) of 1950 are generally missing from [Minsky's](#) work.

The simplified structures of frames allow for easy analogical reasoning, a much prized feature in any intelligent agent. The procedural attachments provided by frames also allow a degree of flexibility that makes for a more realistic representation and gives a natural affordance for programming applications.

#### ➤ **Backward chaining**

In artificial intelligence, forward and backward chaining is one of the important topics, but before understanding forward and backward chaining lets first understand that from where these two terms came.

#### **Inference engine:**

The inference engine is the component of the intelligent system in artificial intelligence, which applies logical rules to the knowledge base to infer new information from known facts. The first inference engine was part of the expert system. Inference engine commonly proceeds in two modes, which are:

- Forward chaining**
- Backward chaining**

## Horn Clause and Definite clause:

Horn clause and definite clause are the forms of sentences, which enables knowledge base to use a more restricted and efficient inference algorithm. Logical inference algorithms use forward and backward chaining approaches, which require KB in the form of the **first-order definite clause**

**Definite clause:** A clause which is a disjunction of literals with **exactly one positive literal** is known as a definite clause or strict horn clause.

**Horn clause:** A clause which is a disjunction of literals with **at most one positive literal** is known as horn clause. Hence all the definite clauses are horn clauses.

**Example:**  $(\neg p \vee \neg q \vee k)$ . It has only one positive literal k.

It is equivalent to  $p \wedge q \rightarrow k$ .

## Backward Chaining:

Backward-chaining is also known as a backward deduction or backward reasoning method when using an inference engine. A backward chaining algorithm is a form of reasoning, which starts with the goal and works backward, chaining through rules to find known facts that support the goal.

## Properties of backward chaining:

- It is known as a top-down approach.
- Backward-chaining is based on modus ponens inference rule.
- In backward chaining, the goal is broken into sub-goal or sub-goals to prove the facts true.
- It is called a goal-driven approach, as a list of goals decides which rules are selected and used.
- Backward -chaining algorithm is used in game theory, automated theorem proving tools, inference engines, proof assistants, and various AI applications.
- The backward-chaining method mostly used a **depth-first search** strategy for proof.

**Example:**In backward-chaining, we will use the same above example, and will rewrite all the rules

- $American(p) \wedge weapon(q) \wedge sells(p, q, r) \wedge hostile(r) \rightarrow Criminal(p) \dots(1)$
- $Owns(A, T1) \dots\dots\dots(2)$
- $Missile(T1)$
- $?p Missiles(p) \wedge Owns(A, p) \rightarrow Sells(Robert, p, A) \dots\dots(4)$
- $Missile(p) \rightarrow Weapons(p) \dots\dots(5)$
- $Enemy(p, America) \rightarrow Hostile(p) \dots\dots(6)$
- $Enemy(A, America) \dots\dots\dots(7)$
- $American(Robert). \dots\dots\dots(8)$

## ➤ Forward chaining

### **Inference engine:**

The inference engine is the component of the intelligent system in artificial intelligence, which applies logical rules to the knowledge base to infer new information from known facts. The first inference engine was part of the expert system. Inference engine commonly proceeds in two modes, which are:

- a. **Forward chaining**
- b. **Backward chaining**

### **A. Forward Chaining**

Forward chaining is also known as a forward deduction or forward reasoning method when using an inference engine. Forward chaining is a form of reasoning which start with atomic sentences in the knowledge base and applies inference rules (Modus Ponens) in the forward direction to extract more data until a goal is reached.

The Forward-chaining algorithm starts from known facts, triggers all rules whose premises are satisfied, and add their conclusion to the known facts. This process repeats until the problem is solved.

### **Properties of Forward-Chaining:**

- It is a down-up approach, as it moves from bottom to top.
- It is a process of making a conclusion based on known facts or data, by starting from the initial state and reaches the goal state.
- Forward-chaining approach is also called as data-driven as we reach to the goal using available data.
- Forward -chaining approach is commonly used in the expert system, such as CLIPS, business, and production rule systems.

### **Example:**

**"As per the law, it is a crime for an American to sell weapons to hostile nations. Country A, an enemy of America, has some missiles, and all the missiles were sold to it by Robert, who is an American citizen."**

Prove that **"Robert is criminal."**

To solve the above problem, first, we will convert all the above facts into first-order definite clauses, and then we will use a forward-chaining algorithm to reach the goal.

## UNIT-4

### PLANNING AND MACHINE LEARNING

#### ➤ **Basic plan generation system**

Artificial intelligence is an important technology in the future. Whether it is intelligent robots, self-driving cars, or smart cities, they will all use different aspects of artificial intelligence!!! But Planning is very important to make any such AI project.

Even Planning is an important part of Artificial Intelligence which deals with the tasks and domains of a particular problem. Planning is considered the logical side of acting.

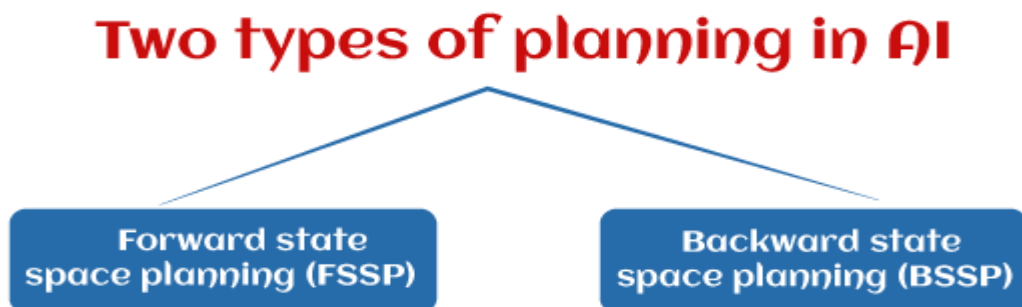
Everything we humans do is with a definite goal in mind, and all our actions are oriented towards achieving our goal. Similarly, Planning is also done for Artificial Intelligence.

**For example**, Planning is required to reach a particular destination. It is necessary to find the best route in Planning, but the tasks to be done at a particular time and why they are done are also very important.

#### **What is a Plan?**

We require domain description, task specification, and goal description for any planning system. A plan is considered a sequence of actions, and each action has its preconditions that must be satisfied before it can act and some effects that can be positive or negative.

So, we have **Forward State Space Planning (FSSP)** and **Backward State Space Planning (BSSP)** at the basic level.



#### **1. Forward State Space Planning (FSSP)**

FSSP behaves in the same way as forwarding state-space search. It says that given an initial state  $S$  in any domain, we perform some necessary actions and obtain a new state  $S'$  (which also contains some new terms), called a progression. It continues until we reach the target position. Action should be taken in this matter.

- **Disadvantage:** Large branching factor
- **Advantage:** The algorithm is Sound

## 2. Backward State Space Planning (BSSP)

BSSP behaves similarly to backward state-space search. In this, we move from the target state  $g$  to the sub-goal  $g$ , tracing the previous action to achieve that goal. This process is called regression (going back to the previous goal or sub-goal). These sub-goals should also be checked for consistency. The action should be relevant in this case.

- **Disadvantages:** not sound algorithm (sometimes inconsistency can be found)
- **Advantage:** Small branching factor (much smaller than FSSP)

So for an efficient planning system, we need to combine the features of FSSP and BSSP, which gives rise to target stack planning which will be discussed in the next article.

### What is planning in AI?

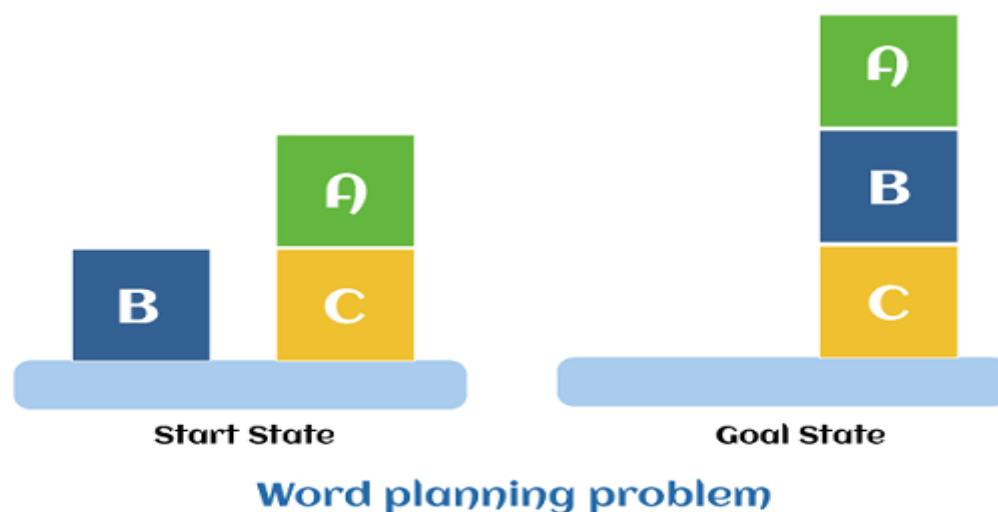
Planning in artificial intelligence is about decision-making actions performed by robots or computer programs to achieve a specific goal.

Execution of the plan is about choosing a sequence of tasks with a high probability of accomplishing a specific task.

### Block-world planning problem

- The block-world problem is known as the Sussmann anomaly.
- The non-interlaced planners of the early 1970s were unable to solve this problem. Therefore it is considered odd.
- When two sub-goals,  $G_1$  and  $G_2$ , are given, a non-interleaved planner either produces a plan for  $G_1$  that is combined with a plan for  $G_2$  or vice versa.
- In the block-world problem, three blocks labeled 'A', 'B', and 'C' are allowed to rest on a flat surface. The given condition is that only one block can be moved at a time to achieve the target.

The start position and target position are shown in the following diagram.



➤ **Advanced plan generation system**

**Planning-Goal Stack Algorithm**

One of the earliest techniques is planning using goal stack. Problem solver uses single stack that contains

- sub goals and operators both
- sub goals are solved linearly and then finally the conjoined sub goal is solved.

Plans generated by this method will contain complete sequence of operations for solving one goal followed by complete sequence of operations for the next etc.

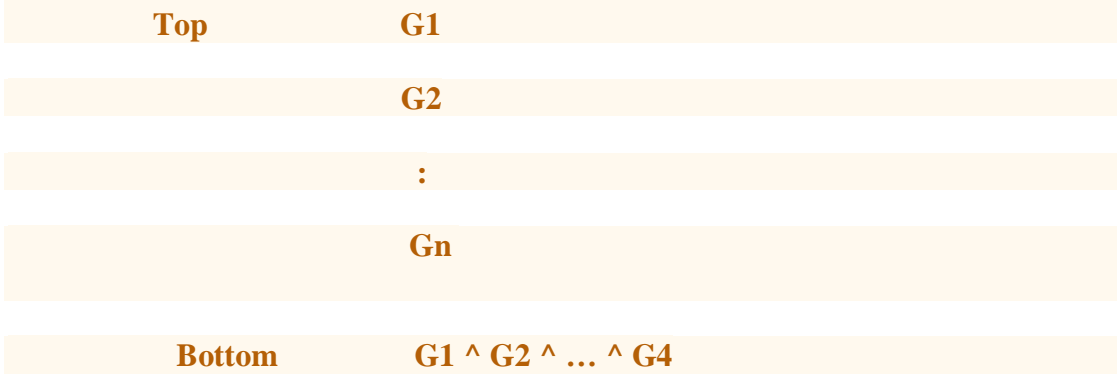
Problem solver also relies on

- **A database that describes the current situation.**
- **Set of operators with precondition, add and delete lists.**

Let us assume that the goal to be satisfied is:

$$\mathbf{GOAL = G1 \wedge G2 \wedge \dots \wedge Gn}$$

Sub-goals G1, G2, ... Gn are stacked with compound goal  $G1 \wedge G2 \wedge \dots \wedge Gn$  at the bottom.



At each step of problem solving process, the top goal on the stack is pursued

**Algorithm**

Find an operator that satisfies sub goal G1 (makes it true) and replace G1 by the operator.

If more than one operator satisfies the sub goal then apply some heuristic to choose one.

In order to execute the top most operation, its preconditions are added onto the stack. Once preconditions of an operator are satisfied, then we are guaranteed that operator can be applied to produce a new state.

New state is obtained by using ADD and DELETE lists of an operator to the existing database.

Problem solver keeps track of operators applied.

This process is continued till the goal stack is empty and problem solver returns the plan of the problem.



## ➤ K STRIPS

### Modal Operator K :

We are familiar with the use of connectives  $\wedge$  and  $\vee$  in logics. Thinking of these connectives as operators that construct more complex formulas from simpler components. Here, we want to construct a formula whose intended meaning is that a certain agent knows a certain proposition.

The components consist of a term denoting the agent and a formula denoting a proposition that the agent knows. To accomplish this, modal operator K is introduced. For example, to say that Robot (name of agent) know that block A is on block B, then write,

$K(\text{Robot}, \text{On}(A,B))$

The sentence formed by combining K with the term Robot and the formula  $\text{On}(A,B)$  gets a new formula, the intended meaning of which is “Robot knows that block A is on block B”.

The words “knows” and “belief” is different in meaning. That means an agent can believe a false proposition, but it cannot know anything that is false.

Some examples,

$K(\text{Agent1}, K(\text{Agent2}, \text{On}(A,B) ) )$  ], means Agent1 knows that Agent1 knows that A is on B.

$K(\text{Agent1}, \text{On}(A,B)) \vee K(\text{Agent1}, \text{On}(A,C) )$  means that either Agent1 knows that A is on B or it knows that A is on C.

$K(\text{Agent1}, \text{On}(A,B)) \vee K(\text{Agent1}, \neg\text{On}(A,B) )$  means that either Agent1 knows whether or not A is on B.

Example in Planning Speech Action:

We can treat speech acts just like other agent systems. Our agent can use a plan-generating system to make plans comprising speech acts and other actions. To do so, it needs a model of the effects of these actions.

Consider for example,  $\text{Tell}( A, \varphi )$  , where A is Agent and  $\varphi$  is true.

We could model the effects of that action by the STRIPS rule :

$\text{Tell}( A, \varphi ) :$

Precondition :  $\text{Next\_to}(A) \wedge \varphi \wedge \neg K(A, \varphi)$

Delete :  $\neg K(A, \varphi)$

Add :  $K(A, \varphi)$

## ➤ Strategic explanation

### What is AI Strategy?

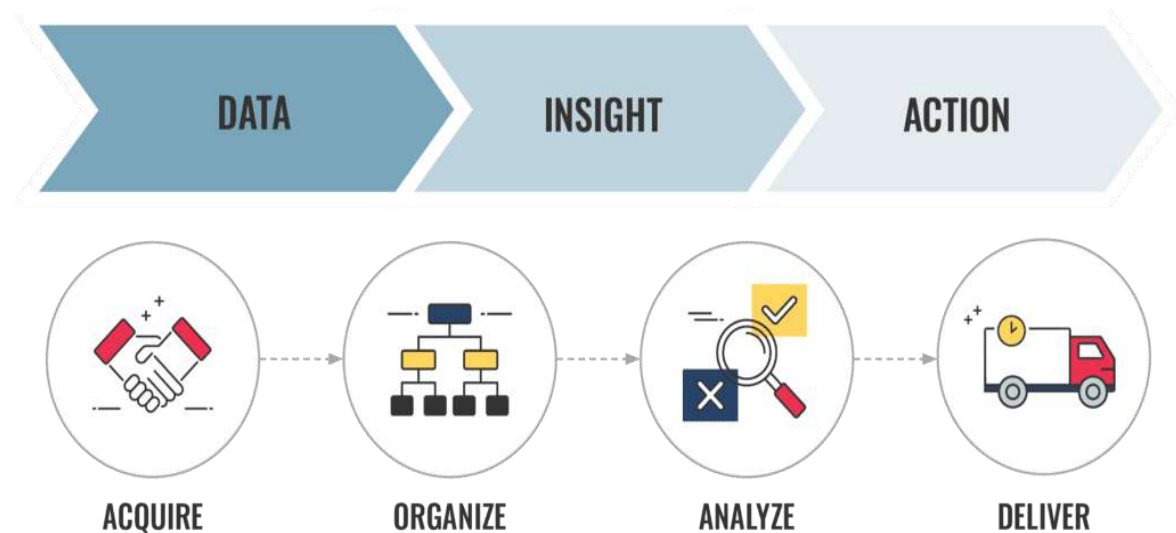
As your organization grows, it will produce more and more data. Just as having an effective data strategy will make sure that information growth can be properly managed, an effective AI strategy will make sure that that information growth translates to business value. Use your data to:

- Segment customers and products into groups that have similar behaviors and needs
- Predict customer purchases and churn risk
- Estimate the lifetime value of a customer or product
- Optimize manufacturing supply chains and perform predictive maintenance to increase uptime

Without an effective strategy and roadmap, many companies find themselves at a technological dead end: the technologies they initially selected don't scale or support cutting-edge AI when it is developed. Bad strategy leads to siloed projects that don't build upon each other into a comprehensive AI program.

Effective AI strategies are opinionated and actionable. They are based on the real-life experiences of AI practitioners and deliver results.

**With a time-tested AI strategy the investments you're making today will continue to provide value well into the future.**



**Why should you build an AI strategy?**

Field	Technique	Analytics	Human Intelligence	Artificial Intelligence	
Data Strategy	Data Visualization	<b>Descriptive:</b> What happened?	<b>Insights</b>	<b>Decisions</b>	<b>Actions</b>
Business Intelligence	Business Intelligence	<b>Diagnostic:</b> Why did it happen?			
Data Science and Machine Learning	Predictive Analytics and Modeling	<b>Predictive:</b> What will happen?			
	Machine Learning and Optimization	<b>Prescriptive:</b> What should I do?			
Artificial Intelligence		<b>Artificial Intelligence:</b> How can I enhance or replace human reasoning?		<b>Decision Automation</b>	

## What is (and is not) covered in an AI Strategy project?

No two companies deal with the same set of challenges, and an “out-of-the-box” AI strategy doesn’t exist. Here are some examples of what is typically covered and not covered.

### What is typically covered?

- Selecting the best technologies for your use cases
- Identifying governance requirements and compatible tools or processes
- Organizing your technologies into an effective tech stack
- Developing a phased implementation plan with realistic timeline and cost estimates
- Establishing training and upskilling guidelines
- Planning team structures and operational processes that scale as you grow

### What is typically considered out of scope?

- Study of legal requirements related to model and data governance
- Specific data transformations and quality evaluation
- Auditing of information security practices and architectures

## How our AI Strategy framework accelerates your project

We focus on efficient decision making and leveraging best practices to guide AI engagements. We make recommendations with the intent of showing immediate impact, and create a practical roadmap with achievable goals.

### **Quicker time to value**

Services leverage a library of reference architectures and best practices to set up organization for success in 4-6 weeks.

### **Investment with immediate impact**

Engagements typically cost between \$40K and \$100K and you’ll be ready to implement the operating model and establish your AI program.

### **Proven best practices**

Developed through working with the most advanced data and analytics organizations and deploying 1000s of AI use cases

### **Built by hands-on practitioners**

Because marketing doesn’t always translate to reality, our AI engagements are opinionated and involve Principal Solutions Architects who have worked on dozens of AI platforms and projects. We’ll build a strategy tailored to your goals and capabilities (and we often help organizations execute on these strategies)

# **A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

## **Value Added Course**

### **Title: ARTIFICIAL INTELLIGENCE**

#### **Test Exercise:**

- 1. An Artificial Intelligence system developed by Terry A. Winograd to permit an interactive dialogue about a domain he called blocks-world.**
- 2. DARPA, the agency that has funded a great deal of American Artificial Intelligence research, is part of the Department of:**
- 3. Who is the "father" of artificial intelligence?**
- 4. KEE is a product of:**
- 5. Default reasoning is another type of -**
- 6. If a robot can alter its own trajectory in response to external conditions, it is considered to be:**
- 7. One of the leading American robotics centers is the Robotics Institute located at**
- 8. What is the name of the computer program that contains the distilled knowledge of an expert?**
- 9. In LISP, the function evaluates both <variable> and <object> is -**
- 10. The first ai programming language was called**

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Vuyyuru-521165, Krishna District, Andhra Pradesh

## **Value Added Course**

**Title: ARTIFICIAL INTELLIGENCE**

### **Key:**

- 1. BACON**
- 2. DEFENSE**
- 3. FISHER ADA**
- 4. INTELLICORPN**
- 5. NON-MONOTONIC REASONING**
- 6. INTELLIGENT**
- 7. CMU**
- 8. EXPERT SYSTEM**
- 9. SET**
- 10. IPL**

**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Department of COMPUTER SCIENCE**

**Value Added Course**  
**Title: ARTIFICIAL INTELLIGENCE**

**Marks List**

**Class: II MPC's**

S. No	Roll No.	Name of the Student	Marks
1	20.601	Chillimuntha Lokesh	07
2	20.602	Loya Naga Padma	09
3	20.604	Pulipaka Chakradhar	10
4	20.605	Alaparathi Kumar Venkata Sai Kiran	07
5	20.606	Elusuri Poojitha	10
6	20.607	Rebba Bhanu Sree	10
7	20.608	Busi Manjusha	08
8	20.609	Gopalajoshula Prathyusha	10
9	20.610	Kolluri Likitha	07
10	20.611	Kurapati Harika	07
11	20.612	Goriparathi Sampoorna	10
12	20.613	Kolli Naga Tirumala Reddy	07
13	20.614	Namala V V Sandhya	08
14	20.615	Tumuluri Yogambika	10
15	20.616	Arilli Veeramma	10

16	20.617	Gangireddy Jahnvi	10
17	20.618	Katta Pravalika	08
18	20.619	Kagitha Hinduja	10
19	20.620	Ede Sravani Durga Devi	09
20	20.621	Munipalli Ajay	07
21	20.622	Dasari Naga Mallika	10
22	20.624	Juvvanapudi Sai Kiran	07
23	20.625	Tavli Ratna Kumari	10
24	20.626	Parimi Prem Chand	10
25	20.628	Shaik Sabiha Tasleem	10
26	20.629	Vasadi Radha	08
27	20.630	Chittamma Purna Chandra Moulika	08
28	20.631	Dokku Gnana Prasanna	09
29	20.633	Debbada Sai	07
30	20.634	Mareedu Aliveni	10

  
Signature of Lecturer

  
Signature of HOD

  
Principal  
Signature of Principal

**Department of COMPUTER SCIENCE**

**Value Added Course**

**Title: ARTIFICIAL INTELLIGENCE**

**Feed Back Form**

1. Is the programme interested to you (Yes/No)
2. Have you attended all the session (Yes/No)
3. Is the content of the program is adequate (Yes/No)
4. Have the teacher covered the entire syllabus? (Yes/No)
5. Is the number of hours adequate? (Yes/No)
6. Do you have any suggestions for enhancing or reducing the number of weeks designed for the program? (Yes/No)
7. On the whole, is the program useful in terms of enriching your knowledge? (Yes/No)
8. Do you have any suggestions on the program? (Yes/No)



**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course / Certificate Course - Attendance Register**

Class / Section : II MPC'S      Year : II year      Department of: Computer Science      Paper: Artificial Intelligence      Lecturer: G. Katyayini

Sl.No	Roll No	Student Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
1	20.601	Chillimuntha Lokesh	a	a	a	P	P	P	P	P	P	a	P	a	P	P	P	
2	20.602	Loya Naga Padma	P	P	P	P	a	P	P	P	P	P	P	P	P	a	P	
3	20.604	Pulipaka Chakradhar	P	P	P	P	P	P	P	a	a	a	P	a	P	a	P	
4	20.605	Alaparathi Kumar Venkata Sai Kiran	a	a	a	P	P	P	P	P	a	P	P	P	P	P	P	
5	20.606	Elusuri Poojitha	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
6	20.607	Rebba Bhanu Sree	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
7	20.608	Busi Manjusha	P	a	P	P	P	P	a	P	P	P	P	P	P	a	P	
8	20.609	Gopalajoshula Prathyusha	P	P	P	P	P	P	P	P	P	a	P	P	P	P		
9	20.610	Kolluri Likitha	a	P	P	P	a	P	P	P	P	P	P	P	P	a		
10	20.611	Kurapati Harika	P	P	P	P	P	a	P	P	P	P	a	P	P	P		
11	20.612	Goriparthi Sampoorna	P	P	P	P	P	P	P	P	P	P	P	P	P	P		
12	20.613	Kolli Naga Tirumala Reddy	a	a	P	P	P	a	P	P	P	P	P	P	P	a	P	
13	20.614	Namala V V Sandhya	P	P	P	P	P	P	a	P	P	P	P	a	P	P		

14	20.615	Tumuluri Yogambika	P	P	P	a	P	P	P	P	P	P	P	P	a	P	P	P
15	20.616	Arilli Veeramma	P	P	P	P	a	P	P	P	P	a	P	P	P	P	P	P
16	20.617	Gangireddy Jahnavi	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
17	20.618	Katta Pravallika	P	P	P	P	P	a	P	P	P	P	P	P	P	P	P	P
18	20.619	Kagitha Hinduja	P	P	P	P	P	P	a	P	P	P	P	P	P	P	P	P
19	20.620	Ede Sravani Durga Devi	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
20	20.621	Munipalli Ajay	P	P	P	P	a	P	P	P	P	P	a	P	P	P	P	P
21	20.622	Dasari Naga Mallika	a	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
22	20.624	Juvvanapudi Sai Kiran	P	a	P	P	P	P	P	a	P	P	P	P	P	P	P	P
23	20.625	Taviti Ratna Kumari	P	P	P	P	P	P	P	P	P	a	a	P	P	P	P	P
24	20.626	Parimi Prem Chand	P	P	P	P	a	P	P	P	a	P	P	P	P	P	P	a
25	20.628	Shaik Sabiha Tasleem	P	P	P	P	P	P	P	P	P	P	P	P	a	P	P	P
26	20.629	Vasadi Radha	P	P	P	P	P	P	P	P	a	P	P	P	P	P	P	a
27	20.630	Chittibomma Poorna Chandra Moulika	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
28	20.631	Dokku Gnana Prasanna	P	a	P	P	P	P	P	P	P	P	P	P	a	P	P	P
29	20.633	Dabbada Sai	P	P	P	P	P	P	a	P	P	P	P	P	P	P	P	P
30	20.634	Mareedu Aliveni	P	a	P	P	P	P	P	P	P	P	P	P	P	P	P	P

Signature of Lecturer



Signature of HOD

PRINCIPAL  
Signature of Principal  
AG & SG Siddhartha Degree College of  
Art & Science (Autonomous), Vuyyuru

**A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course / Certificate Course - Attendance Register**

Class / Section: II MPC'S

Year : II year


Department of: Computer Science

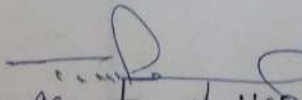
Paper: Artificial Intelligence

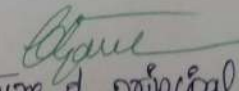
Lecturer: G. Katyayani

Sl.No	Roll No	Student Name	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
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30	20.634	Mareedu Aliveni	P	P	P	P	P	a	P	P	P	a	P	P	P	P	P

  
Signature of Lecturer

  
Signature of HOD

  
Signature of Principal



**ADUSUMILLI GOPALAKRISHNAIAH & SUGARCANE GROWERS  
SIDDHARTHA DEGREE COLLEGE OF ARTS & SCIENCE**

Vuyyuru-521 165, Krishna District, Andhra Pradesh

An Autonomous College in the Jurisdiction of Krishna University

Accredited by NAAC with "A" Grade

ISO 9001:2015 Certified Institution



**DEPARTMENT OF COMPUTER SCIENCE**

**VALUE ADDED COURSE:ARTIFICIAL INTELLIGENCE**

**VAC CODE:AIVAC101**

**CERTIFICATE**

This is to Certify that **Ms.G.Jahnavi** Son /Daughter of shri/Smt: **G.Narayana Murthy** has Successfully completed value added course in **Artificial Intelligence** Conducted by the Department of COMPUTER SCIENCE from **18-11-2021 to 12-01-2022**. We wish him /her bright future.

  
Co-ordinator

  
Head of Department

  
Principal  
PRINCIPAL  
AG & SG Siddhartha Degree College of  
Art&Science (Autonomous),Vuyyuru



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**DEPARTMENT OF COMPUTER SCIENCE**

**VALUE ADDED COURSE:ARTIFICIAL INTELLIGENCE**

**VAC CODE:AIVAC101**

**CERTIFICATE**

This is to Certify that **Ms.T.Ratna Kumari** Son /Daughter of shri/Smt **T.Mariya Dasu** has Successfully completed value added course in **Artificial Intelligence** Conducted by the Department of COMPUTER SCIENCE from **18-11-2021 to 12-01-2022**. We wish him /her bright future.

  
Co-ordinator

  
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Art & Science (Autonomous),Vuyyuru



# **A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

(Managed by: Siddhartha Academy of General & Technical Education, Vijayawada-10)

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## **DEPARTMENT OF POLITICAL SCIENCE**

**2021 -2022**

### **Value Added Course**

**Title: HUMAN RIGHTS AND VALUES**

Name of the Lecturer	:	CH.SANDHYA RANI
Class	:	I B.A
Duration of the Course	:	30 DAYS
VAC Code	:	POL-HRV-01



# **A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

## **Value Added Course**

### **Title: HUMAN RIGHTS AND VALUES**

#### **Objectives :**

1. Objectives: and values is to recognize and uphold the inherent dignity and worth of every human being. This involves ensuring that individuals are treated with respect, fairness, and equality, regardless of their race, gender, religion, nationality, or other characteristics.
2. Guaranteeing Basic Rights and Freedoms: Human rights aim to secure and safeguard essential rights and freedoms for all individuals. These rights include civil and political rights (such as freedom of speech, assembly, and religion), economic and social rights (such as access to education, healthcare, and adequate standards of living), and cultural rights (such as the right to participate in cultural life and enjoy the benefits of scientific progress).
3. Elimination of Discrimination and Inequality: Human rights and values strive to eliminate discrimination, inequality, and marginalization in all forms. This includes combating discrimination based on race, gender, sexual orientation, disability, religion, age, and other grounds. The objective is to create a society where all individuals have equal opportunities and are treated equitably.

**Methodology : Teacher - Centered method**

**Duration : 30 Hours**

# Human Rights

## **What Are Human Rights?**

Human rights are rights inherent to all human beings, regardless of race, sex, nationality, ethnicity, language, religion, or any other status. Human rights include the right to life and liberty, freedom from slavery and torture, freedom of opinion and expression, the right to work and education, and many more. Everyone is entitled to these rights, without discrimination.

## **International Human Rights Law**

International human rights law lays down the obligations of Governments to act in certain ways or to refrain from certain acts, in order to promote and protect human rights and fundamental freedoms of individuals or groups.

One of the great achievements of the United Nations is the creation of a comprehensive body of human rights law—a universal and internationally protected code to which all nations can subscribe and all people aspire. The United Nations has defined a broad range of internationally accepted rights, including civil, cultural, economic, political and social rights. It has also established mechanisms to promote and protect these rights and to assist states in carrying out their responsibilities.

The foundations of this body of law are the Charter of the United Nations and the Universal Declaration of Human Rights, adopted by the General Assembly in 1945 and 1948, respectively. Since then, the United Nations has gradually expanded human rights law to encompass specific standards for women, children, persons with disabilities, minorities and other vulnerable groups, who now possess rights that protect them from discrimination that had long been common in many societies.

## **Universal Declaration of Human Rights**

The Universal Declaration of Human Rights (UDHR) is a milestone document in the history of human rights. Drafted by representatives with different legal and cultural backgrounds from all regions of the world, the Declaration was proclaimed by the United Nations General Assembly in Paris on 10 December 1948 by General Assembly resolution 217 A (III) as a common standard of achievements for all peoples and all nations. It sets out, for the first time, fundamental human rights to be universally protected. Since its adoption in 1948, the UDHR has been translated into more than 500 languages - the most translated document in the world - and has inspired the constitutions of many newly independent States and many new democracies. The UDHR, together with the International Covenant on Civil and Political Rights and its two Optional Protocols (on the complaints procedure and on the death penalty) and the International Covenant on Economic, Social and Cultural Rights and its Optional Protocol, form the so-called International Bill of Human Rights.

## **Economic, social and cultural rights**

The International Covenant on Economic, Social and Cultural Rights entered into force in 1976. The human rights that the Covenant seeks to promote and protect include:

- the right to work in just and favourable conditions;
- the right to social protection, to an adequate standard of living and to the highest attainable standards of physical and mental well-being;
- the right to education and the enjoyment of benefits of cultural freedom and scientific progress.

### **Civil and political rights**

The International Covenant on Civil and Political Rights and its First Optional Protocol entered into force in 1976. The Second Optional Protocol was adopted in 1989.

The Covenant deals with such rights as freedom of movement; equality before the law; the right to a fair trial and presumption of innocence; freedom of thought, conscience and religion; freedom of opinion and expression; peaceful assembly; freedom of association; participation in public affairs and elections; and protection of minority rights. It prohibits arbitrary deprivation of life; torture, cruel or degrading treatment or punishment; slavery and forced labour; arbitrary arrest or detention; arbitrary interference with privacy; war propaganda; discrimination; and advocacy of racial or religious hatred.

### **Human Rights Conventions**

A series of international human rights treaties and other instruments adopted since 1945 have expanded the body of international human rights law. They include the Convention on the Prevention and Punishment of the Crime of Genocide (1948), the International Convention on the Elimination of All Forms of Racial Discrimination (1965), the Convention on the Elimination of All Forms of Discrimination against Women (1979), the Convention on the Rights of the Child (1989) and the Convention on the Rights of Persons with Disabilities (2006), among others.

### **Human Rights Council**

The Human Rights Council, established on 15 March 2006 by the General Assembly and reporting directly to it, replaced the 60-year-old UN Commission on Human Rights as the key UN intergovernmental body responsible for human rights. The Council is made up of 47 State representatives and is tasked with strengthening the promotion and protection of human rights around the globe by addressing situations of human rights violations and making recommendations on them, including responding to human rights emergencies.

The most innovative feature of the Human Rights Council is the Universal Periodic Review. This unique mechanism involves a review of the human rights records of all 193 UN member states once every four years. The Review is a cooperative, state-driven process, under the auspices of the Council, which provides the opportunity for each state to present measures taken and challenges to be met to improve the human rights situation in their country and to meet their international obligations. The Review is designed to ensure universality and equality of treatment for every country.

## **UN High Commissioner for Human Rights**

The United Nations High Commissioner for Human Rights exercises principal responsibility for UN human rights activities. The High Commissioner is mandated to respond to serious violations of human rights and to undertake preventive action.

The Office of the High Commissioner for Human Rights (OHCHR) is the focal point for United Nations human rights activities. It serves as the secretariat for the Human Rights Council, the treaty bodies (expert committees that monitor treaty compliance) and other UN human rights organs. It also undertakes human rights field activities.

Most of the core human rights treaties have an oversight body which is responsible for reviewing the implementation of that treaty by the countries that have ratified it. Individuals, whose rights have been violated can file complaints directly to Committees overseeing human rights treaties.

## **Human Rights and the UN System**

The values of our founders are still not fully realized. Alas, far from it. But they are much more broadly accepted today than they were a few decades ago. The Universal Declaration, in particular, has been accepted in legal systems across the world, and has become a point of reference for people who long for human rights in every country. The world has improved, and the United Nations has made an important contribution. But universal values are also more acutely needed, in this age of globalization, than ever before.

Every society needs to be bound together by common values, so that its members know what to expect of each other, and have some shared principles by which to manage their differences without resorting to violence. That is true of local communities and of national communities. Today, as globalization brings us all closer together, and our lives are affected almost instantly by things that people say and do on the far side of the world, we also feel the need to live as a global community. And we can do so only if we have global values to bind us together. But recent events have shown that we cannot take our global values for granted. I sense a great deal of anxiety around the world that the fabric of international relations may be starting to unravel — and that globalization itself may be in jeopardy.

Globalization has brought great opportunities, but also many new stresses and dislocations. There is a backlash against it -- precisely because we have not managed it in accordance with the universal values we claim to believe in. In the Universal Declaration, we proclaimed that “everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services”.

Just three years ago, in the Millennium Declaration, all States reaffirmed certain fundamental values as being “essential to international relations in the twenty-first century”: freedom, equality, solidarity, tolerance, respect for nature, and shared responsibility. They adopted practical, achievable targets — the Millennium Development Goals — for relieving the blight of extreme poverty and making such rights as education, basic health care and clean water a reality for all.

Many millions of people in the world today are still far from enjoying these rights in practice. That could be changed, if governments in both rich and poor countries lived up to their commitments. Yet, three years after the Millennium Declaration, our attention is focused on issues of war and peace, and we are in danger of forgetting these solemn commitments to fulfil basic human rights and human needs.

Globalization has brought us closer together in the sense that we are all affected by each other’s actions, but not in the sense that we all share the benefits and the burdens. Instead, we have allowed it to drive us further apart, increasing the disparities in wealth and power both between societies and within them. This makes a mockery of universal values. It is not surprising that, in the backlash, those values have come under attack, at the very moment when we most need them.

Whether one looks at peace and security, at trade and markets, or at social and cultural attitudes, we seem to be in danger of living in an age of mutual distrust, fear and protectionism — an age when people turn in on themselves, instead of turning outwards to exchange with, and learn from, each other. Disillusioned with globalization, many people have retreated into narrower interpretations of community. This in turn leads to conflicting value systems, which encourage people to exclude some of their fellow human beings from the scope of their empathy and solidarity, because they do not share the same religious or political beliefs, or cultural heritage, or even skin colour.

We have seen what disastrous consequences such particularist value systems can have: ethnic cleansing, genocide, terrorism, and the spread of fear, hatred and discrimination. So this is a time to reassert our universal values. We must firmly condemn the cold-blooded nihilism of attacks such as those that struck the United States on 11 September 2001. But we must not allow them to provoke a “clash of civilisations”, in which millions of flesh-and-blood human beings fall victim to a battle between two abstractions — “Islam” and “the West” — as if Islamic and Western values were incompatible.

They are not, as millions of devout Muslims living here in Germany, and elsewhere in the West, would be the first to tell you. Yet many of those Muslims now find themselves the objects of suspicion, harassment and discrimination, while in parts of the Islamic world anyone associated with the West or Western values is exposed to hostility and even violence. In the face of such a

challenge, we can reassert universal values only if we are prepared to think rigorously what we mean by them, and how we can act on them.

That means we must also be clear about what they are not. And one thing that should be clear is that the validity of universal values does not depend on their being universally obeyed or applied. Ethical codes are always the expression of an ideal and an aspiration, a standard by which moral failings can be judged rather than a prescription for ensuring that they never occur.

It follows that no religion or ethical system should ever be condemned because of the moral lapses of some of its adherents. If I, as a Christian, for instance, would not wish my faith to be judged by the actions of the Crusaders or the Inquisition, I should be very careful to judge anyone else's faith by the actions that a few terrorists may commit in its name. Also, our universal values require us to recognise the human characteristics, both good and bad, that we have in common with all our fellow human beings, and to show the same respect for human dignity and sensitivity in people of other communities that we expect them to show for ours.

That means we should always be prepared to let other people define their own identity, and not insist on classifying them, however well-meaningly, by our own criteria. If we believe sincerely in individual rights, we must recognise that an individual's sense of identity is almost always bound up with the sense of belonging to one or more groups — sometimes concentric, sometimes intersecting.

Therefore the rights of an individual include the right to empathize, and to express solidarity, with others who share this or that aspect of that individual's identity. And that in turn should affect the way we define the obligations of citizenship, in each of our national communities. We should not oblige people to dissociate themselves from the fate of their co-religionists, or ethnic kin, who are citizens of other States.

Muslims, for example, should not be reviled or persecuted because they identify with Palestinians or Iraqis or Chechens, whatever one thinks of the national claims and grievances of those peoples, or the methods used in their name. And no matter how strongly some of us may feel about the actions of the state of Israel, we should always show respect for the right of Israeli Jews to live in safety within the borders of their own State, and for the right of Jews everywhere to cherish that State as an expression of their national identity and survival.

But if it is wrong to condemn a particular faith or set of values because of the actions or statements of some of its adherents, it must also be wrong to abandon the idea that certain values are universal just because some human beings do not appear to accept them. Indeed, I would argue that it is precisely the existence of such aberrations that obliges us to assert and uphold common values. We need to be able to say that certain actions and beliefs are not just contrary

to our own particular morality, but should be rejected by all humanity. Of course having such common values does not solve all problems, or eliminate the scope for different societies to solve them in different ways.

We may all be sincerely committed to non-violence and respect for life, and yet disagree about whether it is legitimate to take the lives of those who have themselves taken life, or to use violence to defend the innocent when violence is being used against them. We may all be genuinely committed to solidarity with our fellow human beings and a just economic order, and yet not agree which policies will be most effective in bringing about that order. We may all be deeply attached to tolerance and truthfulness, and yet not agree how tolerant we should be of States or systems that seem to us intolerant and untruthful.

And we may all be genuinely committed to equal rights and partnership between men and women, without agreeing on how far the social roles of men and women should be differentiated, or whether it is the responsibility of society to enforce the sanctity of the marriage bond. On all such issues we must expect differences to continue for a long time — between societies and within them. The function of universal values is not to eliminate all such differences, but rather to help us manage them with mutual respect, and without resorting to mutual destruction.

Tolerance and dialogue are essential, because without them there is no peaceful exchange of ideas, and no way to arrive at agreed solutions allowing different societies to evolve in their own way. Those societies that consider themselves modern need to recognise that modernity does not automatically generate tolerance. Even sincere liberals and democrats can sometimes be remarkably intolerant of other views. One should always be on one's guard against such temptations.

On their side, societies that put a high premium on tradition need to recognise that traditions survive best, not when they are rigid and immutable, but when they are living and open to new ideas, from within and from without. It may also be true that, in the long run, tolerance and dialogue within a society are best guaranteed through particular institutional arrangements, such as multi-party elections, or the separation of powers between legislature, executive and judiciary.

But these arrangements are means to an end, not the end in itself. No society should consider that, because it has found them useful, it has an absolute right or obligation to impose them on others. Each society should be given the space, not to distort or undermine universal values, but to express them in a way that reflects its own traditions and culture. Values are not there to serve philosophers or theologians, but to help people live their lives and organize their societies. So, at the international level, we need mechanisms of cooperation strong enough to insist on universal values, but flexible enough to help people realize those values in ways that they can actually apply in their specific circumstances.

In the end history will judge us, not by what we say but by what we do. Those who preach certain values loudest — such as the values of freedom, the rule of law, and equality before the law — have a special obligation to live by those values in their own lives and their own societies, and to apply them to those they consider their enemies as well as their friends.

You don't need to be tolerant of those who share your opinions, or whose behaviour you approve. It is when we are angry that we most need to apply our proclaimed principles of humility and mutual respect. Nor should we ever be satisfied with things as they are. The state of the world does not allow that.

In our own case, at the United Nations, we are sometimes tempted to proclaim our self-evident utility and relevance to the world, and to blame our Member States for not making better use of such a valuable institution. But that is not enough.

We need to do everything we can to improve the United Nations — that is, to make it more useful to the world's peoples, in whose name it was founded, and more exemplary in applying the universal values that all its members claim to accept. That means that we need to be more effective in many aspects of our work, and especially in what we do to promote and protect human rights.

## Human Values

In order for young people to work in the defence of human rights and towards a deeper understanding of human rights issues, they need a knowledge and understanding of certain issues, and certain key skills. They also need to develop and practice appropriate attitudes and values.

**In terms of knowledge**, young people need to develop an understanding of the main concepts and the historical development of human rights, as well as the standards demanded by the main instruments and mechanisms for human rights protection. This means knowing about one's own rights and the way they interact with other people's, as well as knowing how to defend human rights.

**In terms of skills**, young people need to be able to communicate and advocate for human rights in public and private, to be able to assess cases from a human rights standpoint, and to reflect on what constitutes an abuse of human rights. Other important skills include dealing with conflict



and learning to transform it in a constructive manner, and participating actively and constructively in the community.

**In terms of attitudes and values**, young people need to develop motivation and a commitment to the protection of human dignity; empathy and solidarity for others; and a sense of justice and responsibility for their own actions and those of others.

In relation to gender equality and gender-based violence, **it is important that young people feel confident and able to address and combat gender inequalities and gender stereotypes**, including their own role in perpetuating or combating them, within a human rights framework. Knowledge of human rights instruments specifically concerned with gender equality is also important.

**It is essential that young people have a deeper understanding about how human rights relating to gender equality are based on people's needs, and why they have to be protected.** Young people with no direct experience of gender-based violence may think that the issue is of no concern to them, but from a human rights perspective, such a position is not acceptable. People everywhere have a responsibility to protect the human rights of others, including rights related to gender.

People have different ways of understanding important values, and therefore perceive rights and responsibilities differently. This means that human rights issues, including those which are gender related, are often controversial. Human rights education provides a framework to address and deal with these differences in understanding values and which manifest themselves as conflicts of opinion. Human rights education with young people is also about equipping young people with the ability to appreciate different points of view about a question, even if they are not necessarily in agreement and helping them to develop skills to reach mutually agreeable solutions.

This website and its activities are based on an understanding that conflicts of opinion can be used constructively for the learning process, provided that the facilitator feels confident in addressing possible conflicts, and confident about managing diverging opinions in a group. The purpose is not so much that everyone needs to agree with a given result, but rather that the participants are also able to learn from the process of discussion .

# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Value Added Course Student Enrolment Sheet

Class : I B.A

S. No	Roll No.	Name of the Student	Signature
1	2011011	N. pragathi sri	N. Pragathi sri
2	2011012	V. Gayatri	V. Gayatri
3	2011013	N. Rakesh	N. Rakesh
4	2011019	T. Balavardhan	T. Balavardhan
5	2011031	Y. Gayatri	Y. Gayatri
6	2011042	B. chintanah	B. Chintanah
7	2011043	V. Sai	V. Sai
8	2011047	M. Naresh	M. Naresh
9	2011048	P. Mani	P. Mani
10	2011049	Ab. Raheem	Ab. Raheem
11	2011050	K. Nagaraju	K. Nagaraju
12	2011051	S. Ravikumar	S. Ravikumar
13	2011053	G. Dhana Lakshmi	G. Dhana Lakshmi
14	2011058	Y. Neeraja	Y. Neeraja
15	2011060	V. Mounika Devi	V. Mounika Devi

Ch. Sandhya Devi

Head, Department of Political Science  
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**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**

**Title: HUMAN RIGHTS AND VALUES**

Date From 25/11/2021 to 31/12/2021

Date	Content	Module No.
25.11.21 to 06.12.21	<ul style="list-style-type: none"><li>• <b>Respect:</b> Treating others with dignity, acknowledging their rights, and valuing their perspectives and identities.</li><li>• <b>Equality:</b> Ensuring that all individuals have equal opportunities and are not discriminated against based on their characteristics or circumstances.</li></ul>	I
07.12.21 to 12.12.21	<ul style="list-style-type: none"><li>• <b>Justice:</b> Upholding fairness and impartiality in the treatment of individuals and addressing injustices when they occur.</li><li>• <b>Freedom:</b> Respecting the autonomy and rights of individuals to express themselves, make choices, and participate in society without undue restrictions.</li></ul>	II
13.12.21 to 25.12.21	<ul style="list-style-type: none"><li>• <b>Tolerance:</b> Embracing diversity and accepting differences of opinion, beliefs, and practices.</li><li>• <b>Compassion:</b> Showing empathy and understanding towards the suffering and challenges faced by others.</li></ul>	III
26.12.21 to 31.12.21	Human rights and values often go hand in hand. Human rights provide a legal and moral framework for upholding values such as respect, equality, and justice. When societies prioritize and protect human rights, they create an environment that fosters the development and flourishing of these shared values.	IV

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Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**  
**Title: HUMAN RIGHTS AND VALUES**

**Test Exercise:**

- **Advocacy and Awareness:**
- **Diplomatic Pressure:**
- **Legal and Judicial Measures:**
- **Capacity-Building and Empowerment:**
- **Humanitarian Assistance:**
- **Monitoring and Follow-up:**

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Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**

**Title: HUMAN RIGHTS AND VALUES**

**Key:**

**Human Dignity:** The inherent worth and value of every individual, which forms the foundation of human rights.

**Universality:** Human rights are applicable to all individuals, regardless of their nationality, race, gender, religion, or any other characteristic.

**Equality:** The principle that all individuals are entitled to equal rights and opportunities, without discrimination or favoritism.

**Non-Discrimination:** The obligation to ensure that individuals are not treated unfairly or differently based on their characteristics or circumstances.

**Civil and Political Rights:** Fundamental rights that protect individuals' freedoms of expression, assembly, religion, and participation in the political process.

**Economic, Social, and Cultural Rights:** Rights related to education, healthcare, housing, employment, and a decent standard of living, which are essential for individuals' well-being and development.

**Rule of Law:** The principle that laws should be fair, just, and accessible to all individuals, and that individuals are accountable for their actions.

**Accountability:** The responsibility of individuals, governments, and institutions to answer for their actions or omissions that violate human rights.

**Justice:** Fairness, impartiality, and the right to a fair trial, which are essential components of human rights protection.

**Freedom from Torture and Cruel, Inhuman, or Degrading Treatment:** The prohibition of any form of torture, cruel, inhuman, or degrading treatment or punishment.

**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Department of political science**

**Value Added Course**

**Title: HUMAN RIGHTS AND VALUES**

**Marks List**

Class: IBA

S. No	Roll No.	Name of the Student	Marks
1	2011011	N. Pragathi Sri	9
2	2011012	N. Gayatri	9
3	2011013	N. Rakesh	8
4	2011019	T. Balavardhan	7
5	2011031	Y. Gayatri	9
6	2011042	B. Ghintiah	9
7	2011043	V. Sai	9
8	2011047	M. Naresh	8
9	2011048	P. Mani	8
10	2011049	Ab. Raheem	7
11	2011050	K. Nagaraju	8
12	2011051	S. Ravi kumar	8
13	2011053	G. Phanalakshmi	7
14	2011058	Y. Neeraja	8
15	2011060	V. Mounika Devi	7

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# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Department of POLITICAL SCIENCE

### Value Added Course

### Title: HUMAN RIGHTS AND VALUES

### Feed Back Form

1. Is the programme interested to you  (Yes/No)
2. Have you attended all the session  (Yes/No)
3. Is the content of the program is adequate  (Yes/No)
4. Have the teacher covered the entire syllabus?  (Yes/No)
5. Is the number of hours adequate?  (Yes/No)
6. Do you have any suggestions for enhancing or reducing the number of weeks designed for the program?  (Yes/No)
7. On the whole, is the program useful in terms of enriching your knowledge?  (Yes/No)
8. Do you have any suggestions on the program?  (Yes/No)

1. 2011042 - B. chintaiiah - B. Chintaiiah.
2. 2011043 - V. Sai - V. Sai



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# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Value Added Course / Certificate Course - Attendance Register

Class / Section: I BA

Year : 2021

Department of: Political Science Paper: value added Course Lecturer: Ch. Sandhya Rani

Sl. No	Roll No	Student Name	Category	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
1	2011011	N. Pragathi Sri		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
2	2011012	V. Gayathri		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
3	2011013	N. Rakesh		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
4	2011019	T. Balavardhan		P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	13
5	2011031	Y. Gayatri		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
6	2011042	B. chintaiiah		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
7	2011043	V. Sai		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
8	2011047	M. Naresh		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
9	2011048	P. Mani		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
10	2011049	Ab. Raheem		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
11	2011050	K. Naga Raju		P	P	P	P	P	A	P	P	P	P	A	P	P	P	P	13
12	2011051	S. Ravi kumar		P	P	P	A	P	P	P	P	A	P	P	P	P	P	P	13
13	2011053	G. Dhana lakshmi		P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	13
14	2011058	Y. Neeraja		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
15	2011060	V. Mounika devi		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15

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# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Value Added Course / Certificate Course - Attendance Register

Class / Section: **I BA**

Year : **2021**

Department of: **Political Science** Paper: **value added Course** Lecturer: **Ch. Sandhya Rani**

Sl. No	Roll No	Student Name	Category	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
1	20110011	N. Pragathi sri		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
2	2011012	V. Gayatri		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
3	2011013	N. Rakesh		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
4	2011019	T. Balavardhan		P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	13
5	2011031	Y. Gayatri		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
6	2011042	B. chintaiab		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
7	2011043	V. sai		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
8	2011047	M. Naxesh		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
9	2011048	P. Mani		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
10	2011049	Ab. Raheem		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
11	2011050	K. Nagaxaju		P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	13
12	2011051	S. Ravi kumar		P	P	A	P	P	P	P	P	A	P	P	P	P	P	P	13
13	2011053	G. Dhana lakshmi		P	P	P	P	P	P	A	P	P	P	A	P	P	P	P	13
14	2011058	Y. Neeraja		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
15	2011060	V. Mounika Devi		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15

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**ADUSUMILLI GOPALAKRISHNAIAH AND SUGARCANE GROWERS  
SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE,  
(AUTONOMOUS) VUYYURU A.P  
(Accredited at "A" level by NAAC, Bengaluru)**



**Department of Political Science**

**VALUE ADDED COURSE: *HUMAN RIGHTS AND VALUES***

**CERTIFICATE**

This is to Certify that. *V. Sai*

Son/Daughter of Shri/Smt *V. Ramu*

has Successfully completed value added course in ***HUMAN RIGHTS AND VALUES***

Conducted by the Department of Political Science from 25-11-2021 to 31-12-2021 We wish him her bright future

*Ch. Sandhya Rani*  
Co-ordinator

*Ch. Sandhya Rani*  
Head of Department

Head, Department of Political Science  
A.G. & S.G. Siddhartha Degree College  
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AG & SG Siddhartha Degree College of  
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**Adusumilli Gopalakrishnaiah & Sugarcane Growers  
Siddhartha Degree College of Arts & Science**

Vuyyuru – 521165, Krishna District, Andhra Pradesh  
(An Autonomous College in the Jurisdiction of Krishna University, Machilipatnam)  
Accredited by NAAC with "A" Grade ISO 9001:2015 Certified Institution  
Phone No: 08676-233267 Email ID: [agsgsiddhartha@gmail.com](mailto:agsgsiddhartha@gmail.com) website:  
<http://agsgsc.edu.in>

**DEPARTMENT OF BOTANY  
VALUE ADDED COURSE  
FLORI CULTURE**

**2021-22**



**Duration: 30days**

**DATE:- 02-12-2021 TO 03-02-2022**

**COURSE CODE:- VACBOTFC-02**

**II BZC (E.M)**

# **A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

(Managed by: Siddhartha Academy of General & Technical Education, Vijayawada-10)

An Autonomous College in the Jurisdiction of Krishna University

Accredited by NAAC with "A" Grade

ISO 9001:2015 Certified Institution



## **DEPARTMENT OF BOTANY**

### **Value added Course**

**Title: FLORI CULTURE**

**2021 – 22**

Name of the Lecturer	: Ch. Beulah Ranjani
Class	: II BZC (E.M)
Duration of the Course	: 02.12.2021 to 03.02.2022
VAC Code	: VACBOTFC-02

# **A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

## **Value added Course**

### **Objectives:**

it deals with the cultivation of flowers and ornamental crops from the time of planting to the time of harvesting. It also includes production of planting materials through seeds, cuttings, budding, grafting.

**Methodology:** Floriculture includes cultivation of flowering and ornamental plants for direct sale or for use as raw materials in cosmetic and perfume industry and in the pharmaceutical sector. It also includes production of planting materials through seeds, cuttings, budding and grafting. etc, up to the marketing of the flower and flower produce.

**Duration** :30 Days ( 02.12.2021 to 03.02.2022)

# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Value Added Course / Certificate Course

### Student Enrolment Sheet

Class : \_\_\_\_\_

S. No	Roll No.	Name of the Student	Signature
1	2141502	K. Bindusri	K. Bindusri
2	2141503	SK. Reshma sultana	SK. Reshma
3	2141504	R. Keerthi	R. Keerthi
4	2141505	J. Venkateswaramma	J. Venkateswaramma
5	2141506	K. Hemanth	K. Hemanth
6	2141507	K. Sravanthi	K. Sravanthi
7	2141509	p. Sonisha	P. Sonisha
8	2141510	P. Siva Naga Lakshmi	P. Sivanga Lakshmi
9	2141511	G. Siri	G. Siri
10	2141512	SK. Abdul Rafi	SK. Abdul Rafi
11	2141514	p. Srividhya	P. Srividhya
12	2141515	p. Sruthi	D. Sruthi
13	2141516	G. Nagarjaneyulu	G. Nagarjaneyulu
14	2141517	M. pavani	M. Pavani
15	2141519	M. Venkata manoja	M. Venkata manoja

**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course / Certificate Course**

**Student Enrolment Sheet**

Class : \_\_\_\_\_

S. No	Roll No.	Name of the Student	Signature
1	2141520	V. Thanu Sridatta sudha	V.T.D. sudha.
2	2141523	P. Bhavani	P.P.V.S.N.D. Bhavani
3	2141524	D. Naga Tulasi	D.N. Tulasi
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

# **A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

## **Value added Course**

### **Title: FLORICULTURE**

**Date:** 30 days - ( 02.12.2021 to 03.02.2022)

<b>Unit</b>	<b>Learning</b>	<b>Lecture Hours</b>
I	<b>Units</b> 1. Ornamental Plants: Flowering annuals; herbaceous, perennials: Shade and ornamental trees. 2. Ornamental bulbous and foliage plants; Cacti and succulents. 3. Cultivation of plants in pots; Indoor gardening: Bonsai.	6
II	1.Factors affecting flower production; 2.Production and packaging of cut flowers; 3.Cultivation of Important cut flowers (Aster, Dahlia, Gerbera, Anthuriums, Marigold, Rose, Liliu)	6
III	1. Flower arrangements; Methods to prolong vase life of flowers. 2. Management of pests, diseases and harvesting. 3. Methods of harvesting.	6





14. TULIP IS CULTIVATED IN..?

- (a). HP and Kashmir. (b). Uttarakhand and HP.  
(c). Kashmir and Uttrakhand .(d). JK, Ladakh and HP.

.15. IDEAL PLANTING TIME FOR TULIP IS..?

- (a). The Last week of December. (b). Last week of October and first week of November.  
(c). Early December. (d). None of the above.

16.TUBEROSE IS CULTIVATED FOR..?

- (a). Cut flower (b). Essential oil (c). Loose flowers (d). All of the above.

17.SPACING FOR GLADIOLUS SHOULD BE..?

- (a). 15 x 15 (b). 20 x 15 (c). 25 x 20 (d). 30 x 20.

. 18.SHOOT TIP CULTURE HAS BEEN PRACTICED IN..?

- (a). Dahlia. (b). Orchid. (c). Both a and b (d). Marigold.

19.IN INDIA MICRO-PROPAGATION WORKS ARE GOING ON..?

- (a). Rose, anthurium. (b). Chrysanthemum, orchid.  
(c). Carnation, ornamental foliage. (d). All of the above.

20. MOREL DEVELOPED..?

- (a). The shoot tip culture in dahlia. (b). Shoot tip culture in rose.  
(c). The shoot tip culture in orchid. (d). Shoot tip culture in carnation.

.21 EUPATORIUM CANNABIUM IS A..?

- (a). Hedge. (b). Border. (c). Edge. (d). Topiary.

22WHICH IS POT MARIGOLD?

- (a). Calendula. (b). Aster. (c). Portulaca (d). Candytuft.

23.WHICH IS GROWN ONLY FOR FOLIAGE?

- (a). Pansy (b). Portulaca. (c). Daisy. (d). Kochia.

24.WHICH IS KNOWN AS GLOBE AMARANTH..?

- (a). Kochia. (b). Balsam (c). Agratum (d). Hollyhock.

25.WHICH IS KNOWN AS C\*CK'S COMB?

- (a). *It is C. argentea* (b). *Known as C. childsi.*  
(c). *C. plumosa.* (d). *None of the above.*

# **A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

## **Value added Course**

### **Title: FLORICULTURE**

#### **Key**

---

- 1.(c). Both a and b
2. .(b). Japanese Tea Garden.
3. (c). Both a and b
- 4 (c). A hedge.
5. (b). Shaped wire cages. .
6. (c). Air-layring.
7. (b). Ground layering
- 8..(c). 4 – 5 cm
9. (b). 8-HQC.
10. (d). 40%.
- .11.(a). APEDA
- 12(c). Harvesting nstage
13. (c). 2% sucrose and 200 ppm AlSO4.
- 14.(d). JK, Ladakh and HP.
- .15. (b). Last week of October and first week of November.
- 16.(d). All of the above.
17. (d). 30 x 20.
18. (c). Both a and b
19. (d). All of the above.
20. (a). The shoot tip culture in dahlia.
- 21 . (c). Edge.
22. (a). Calendula. .
- 23 . (d). Kochia.
24. (b). Balsam
25. C. plumosa.

**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value added Course**

**Title: FLORICULTURE**  
**Feed Back Form**

1. Is the programme interested to you  (Yes/No)
2. Have you attended all the session  (Yes/No)
3. Is the content of the program is adequate  (Yes/No)
4. Have the teacher covered the entire syllabus?  (Yes/No)
5. Is the number of hours adequate?  (Yes/No)
6. Do you have any suggestions for enhancing or reducing the number of weeks designed for the program?  (Yes/No)
7. On the whole, is the program useful in terms of enriching your knowledge?  (Yes/No)
8. Do you have any suggestions on the program?  (Yes/No)

*CH. Beulah Ranjani*

# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Value Added Course / Certificate Course - Attendance Register

Class / Section:

Year :

Department of:

Paper:

Lecturer:

Sl. No	Roll No	Student Name	Category	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
1	2141502	K. Binduuri		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
2	2141503	SK. Reshma cultara		P	A	P	A	P	P	P	A	A	A	A	A	P	P	A	8
3	2141504	R. Keerthi		P	A	A	A	A	A	P	P	P	P	P	P	P	P	P	10
4	2141505	T. Venkateswaramma		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
5	2141506	K. Hemant		P	P	P	P	A	P	P	P	A	P	P	P	P	P	P	13
6	2141507	K. Sravanthi		P	P	A	P	P	A	P	A	A	P	P	P	P	P	P	11
7	2141509	P. Sonisha		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
8	2141510	P. Siva Nagalakshmi		P	A	P	A	P	P	P	P	P	P	P	P	P	P	P	13
9	2141511	G. Sri		P	P	P	P	P	A	A	A	A	P	P	P	P	P	P	11
10	2141512	SK. Abdul Rafi		P	A	P	P	A	P	P	P	A	P	P	P	P	P	P	12
11	2141514	P. Srividhya		P	A	A	A	P	P	P	P	P	A	P	P	P	P	P	11
12	2141515	D. Sruthi		P	P	P	P	P	A	A	P	P	P	P	A	P	A	P	11
13	2141516	G. Nagarajaneyulu		P	P	A	P	P	A	P	P	P	P	P	P	P	P	P	13
14	2141517	M. pavani		P	A	A	P	P	P	P	A	P	A	P	P	P	P	P	11
15	2141519	M. Venkata manoja		P	P	A	A	A	A	A	P	A	P	P	P	P	P	P	9

# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Value Added Course / Certificate Course - Attendance Register

Class / Section:

Year :

Department of:

Paper:

Lecturer:

Sl. No	Roll No	Student Name	Category	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
1	2141520	V. Thanu Sri datta sudha		P	P	A	P	P	A	P	A	P	P	A	P	P	P	P	11
2	2141523	p. Bhavani		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
3	2141524	D. Naga Tulasi		P	P	P	P	A	A	A	A	A	P	P	P	P	P	P	10
4																			
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14																			
15																			

CH. Beulah Rajani

  
PRINCIPAL

AG & SG Siddhartha Degree College  
Arts & Science (Autonomous), Vuyyuru

# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Department Of Botany Value added Course Title: floriculture

### Marks List

Class: II BZC

S. No	Roll No.	Name of the Student	Marks
1	2141502	K. Bindu Sri	46
2	2141503	SK. Reshma Sulfana	43
3	2141504	R. Keerthi	42
4	2141505	J. Venkateswaramma	44
5	2141506	K. Hemanth	46
6	2141507	K. Sravanthi	45
7	2141509	P. Sonisha	43
8	2141510	P. Siva Naga Lakshmi	46
9	2141511	G. Siri	44
10	2141512	SK. Abdul Rafi	43
11	2141514	p. Srividhya	42
12	2141515	p. Sruthi	43
13	2141516	G. Nagarjaneyulu	40
14	2141517	M. Pavani	41
15	2141519	M. Venkata manoja	43
16	2141520	V. Thanu Sridatta Sudha	47
17	2141523	P. Bhavani	48
18	2141524	D. Naga Tulasi	40



ADUSUMILLI GOPALAKRISHNAIAH AND SUGARCANE GROWERS  
SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE,  
(AUTONOMOUS) VUYYURU A.P  
(Accredited at "A" level by NAAC, Bengaluru)

Department of Botany



CERTIFICATE COURSE: **Floriculture**

CERTIFICATE

This is to Certify that .....**R. Keethi**.....of .....**B.Z.C.**..... has successfully completed Certificate Course in **Floriculture**, organised by the Department of Botany during the Year-2021-2022 and passed the Examination in grade...**'A'**....

*C. B. Rangini*  
Co-ordinator

*C. B. Rangini*  
Head of Department

*[Signature]*  
Principal

PRINCIPAL  
AG & SG Siddhartha Degree College of  
Arts & Science (Autonomous), Vuyyuru







ADUSUMILLI GOPALAKRISHNAIAH AND SUGARCANE GROWERS  
SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE,  
(AUTONOMOUS) VUYYURU A.P  
(Accredited at "A" level by NAAC, Bengaluru)



Department of Botany

CERTIFICATE COURSE: **Floriculture**

CERTIFICATE

This is to Certify that .....~~K. Hemanth~~.....of ....~~B.Z.C.~~..... has successfully completed Certificate Course in **Floriculture**, organised by the Department of Botany during the Year-2021-2022 and passed the Examination in grade...**'A'**....

*C. B. Ranjani*  
Co-ordinator

*C. B. Ranjani*  
Head of Department

*[Signature]*  
Principal

AG & SG Siddhartha Degree College of  
Arts & Science (Autonomous), Vuyyuru





**AdusumilliGopalakrishnaiah& Sugarcane Growers  
Siddhartha Degree College of Arts and Science**  
Autonomous College  
**NAAC 'A' Grade College**  
Vuyyuru, Krishna (Dt)., Andhra Pradesh-521165

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***VALUE ADDED COURSE***

***TITLE: MOCKPARLIMENT***

***VAC CODE: POL-T3***

***On 2<sup>nd</sup> March, 2022 TO 4<sup>th</sup> April 2022***

***Duration of the Course: 30Hrs***

***Organized By***

***Department of Political Science***

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## Contact Us

Door No.2.391, College Road , Near  
Kota complex ,Vuyyuru -521165

[agsgsiddhartha@gmail.com](mailto:agsgsiddhartha@gmail.com)  
[www.agsgsc.edu.in](http://www.agsgsc.edu.in)

A.G.&S.G.S DEGREE COLLEGE, VUYURU



DEPARTMENT OF POLITICAL SCIENCE



Course : Mock Parliament  
Code : VACPOLT3  
Class : I BA  
Duration: 30 Days

Value Added Course  
on  
MOCK PARLIAMENT

# **A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

(Managed by: Siddhartha Academy of General & Technical Education, Vijayawada-10)

An Autonomous College in the Jurisdiction of Krishna University

Accredited by NAAC with "A" Grade

ISO 9001:2015 Certified Institution



## **DEPARTMENT OF POLITICAL SCIENCE**

2021 -2022

**Value Added Course**

**Title: MOCK PARLIMENT**

Name of the Lecturer	:	CH.SANDHYA RANI
Class	:	I B.A
Duration of the Course	:	30 DAYS
VAC Code	:	POL-T3

# **A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

## **Value Added Course**

### **Title: MOCK PARLIMENT**

#### **Objectives :**

- 1. Understanding the legislative process: Mock Parliament provides participants with a practical understanding of how a legislative body functions. It allows them to learn about the different stages of lawmaking, such as proposing bills, debating them, and voting on their passage.**
- 2. Developing debating and public speaking skills: Mock Parliament offers an opportunity for participants to enhance their debating and public speaking abilities. They can practice articulating their viewpoints, constructing persuasive arguments, and responding to counterarguments.**
- 3. Promoting critical thinking: By engaging in Mock Parliament, participants are encouraged to think critically about various issues. They must analyze different perspectives, evaluate evidence, and develop logical reasoning to support their positions.**
- 4. Fostering teamwork and collaboration: Mock Parliament involves teamwork and collaboration among participants. They work together to form political parties or factions, strategize their positions, and negotiate with other members to gain support for their proposals. This promotes collaboration, consensus-building, and understanding of diverse viewpoints.**

**Methodology : Teacher - Centered method**

**Duration : 30 Hours**

# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Value Added Course Student Enrolment Sheet

Class : I B.A

S. No	Roll No.	Name of the Student	Signature
1	2111001	V. Ashok kumar	V. Ashok kumar
2	2111002	K. Ajay kumar	K. Ajay kumar
3	2111004	I. Raja Babu	I. Raja Babu
4	2111005	V. Sai Binesh	V. Sai Binesh
5	2111006	M. Ram	M. Ram
6	2111008	Reddy Raju	Reddy Raju
7	2111010	V. chandra teja	V. chandra teja
8	2111011	sayyad firoj Basha	S. Firoj Basha
9	2111012	K. Aditya	K. Aditya
10	2111013	P. Hussian khan	P. Hussian khan
11	2111014	K. Sai Jyostana	K. Sai Jyostana
12	2111016	P. Pujitha	P. Pujitha
13	2111017	P. Siva Venkata sukanya	P. Siva Venkata sukanya
14	2111018	S. Naga lakshmi	S. Naga lakshmi
15	2111019	T. Neelima	T. Neelima

Ch. Sandhya Devi

Head, Department of Political Science  
A.G. & S.G. Siddhartha Degree College  
(Autonomous), VUYURU - 521 165

Ch. Sandhya Devi  
PRINCIPAL

AG & SG Siddhartha Degree College of  
Arts & Science (Autonomous), Vuyyuru

**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**  
**Student Enrolment Sheet**

Class : I B.A

S. No	Roll No.	Name of the Student	Signature
16.	2111020	M. Anil kumar	M. Anil Kumar
17.	2111022	S. Kavya	S. Kavya
18.	2111023	M. Prasanthi	M. Prasanthi
19.	2111024	B. Prasanthi	B. Prasanthi
20.	2111025	V. thufhan menendra	V. Thufhan menendra
21	2111026	D. Durga devi	D. Durgadevi
22	2111027	K. Halleuya	K. Halleuya
23	2111029	Abdul · Mansoor	Abdul Mansoor
24	2111030	T. Deepika	T. Deepika
25	2111031	Bandi · Vinnu	Bandi Vinnu
26	2111032	ch. Nani	Ch. Nani
27	2111035	K. Naghava	K. Naghava
28	2111036	P. Rajashekhar	P. Rajashekhar
29	2111038	Gi. Naga Abhinay	Gi. Naga Abhinay
30	2111039	E. lokesh.	E. Lokesh.

Ch. Sandhya Devi

  
PRINCIPAL





# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Value Added Course

Title: **MOCK PARLIMENT**

Date From 2/3/2022 to 4/4/2022

Date	Content	Module No.
2.3.22 to 9.3.22	Role Assignment: Participants are assigned roles as members of the parliament or legislative body. These roles can include Prime Minister, Speaker of the House, Leader of the Opposition, Cabinet Ministers, Members of Parliament (MPs), and representatives from different political parties.	I
10.3.22 to 17.3.22	Legislative Agenda: A legislative agenda is developed, which includes a list of proposed bills or motions that will be debated and voted upon during the simulation. These bills can cover a wide range of topics such as education, healthcare, environment, economy, social issues, or any other relevant areas of interest.	II
18.3.22 to 25.3.22	Bill Proposals: Participants are given the opportunity to propose bills or motions. These proposals should be well-researched and contain clear objectives, justifications, and potential impacts. Participants can work individually or in groups to draft and present their bills.	III
26.3.22 to 4.4.22	Voting and Decision-Making: Following the debates, participants engage in voting on the proposed bills. Voting can be done electronically or through a show of hands. The results determine the fate of the bills, whether they pass or fail. This helps participants understand the importance of majority support and the democratic decision-making process.	IV

## UNIT-I

### Role of Agenda

In this lesson, we learned the purpose and methods of setting agendas. Additionally, we learned the importance of setting an agenda, technology and agenda setting, and the effects of agenda-setting on audiences. Answer the following questions to test your mastery of this subject.

#### Section 1: Definition of Agenda Setting

What is the definition of and purpose of an agenda?

What is the definition of agenda setting?

What are the two basic assumptions to be considered during agenda setting?

Does agenda setting reflect or create reality? Can the agenda setting be used to modify the current reality?

#### Section 2: Technology

What are common communication mediums used for agenda setting?

What are some of the major impacts the internet and social media has had on agenda setting?

#### Section 3: The Effect on Audiences

One of the objectives of agenda setting is to improve or modify audience opinions regarding the topic of the agenda. How can a message modify the beliefs and values of an audience? How can a message enhance audience sensitivity to an issue?

What are obtrusive issues? Will the agenda setting on obtrusive issues impact a larger audience than other issues?

What will be some challenges in agenda setting on obtrusive issues in comparison to special interests?

What is the central claim of agenda setting theory?

The central claim of agenda setting theory is an individual or organization using mass media to influence the importance of objectives or goals on their agenda. The agenda can contain political, economic, or social goals that are partial to a person or organization.

What is framing in agenda setting?

Framing involves two parts to get the agenda setting message across. The media wants to influence how people think about something and how they should react to a given situation or event.

What are some criticisms of the agenda setting theory?

Agenda setting theory is heavily criticized for not showing all the details in an event or about a particular issue. Agenda setting is also criticized for causing more divisiveness rather than unity on issues.

## UNIT-II

The legislative power of the states and the centre are defined in the Constitution and these powers are divided into three lists. The subjects that are not mentioned in any of the three lists are known as residuary subjects. Subject to the provisions in the Constitution elsewhere, the power to legislate on residuary subjects, rests with Parliament or state legislative assembly as the case may be per Article 245. Deemed amendments to the Constitution which could be passed under legislative powers of Parliament, are no more valid after the addition of Article 368 (1) by 24th Amendment.

A bill is the draft of a legislative proposal. It has to pass through various stages before it becomes an act of Parliament.[8][9] There are three stages through which a bill has to pass in one house of Parliament. The procedure is similar for the legislative assemblies of states.

## Unit-III

### BILL PROPOSALS

#### First reading

The legislative process begins with the introduction of a bill in either house of Parliament, i.e. the Lok Sabha or the Rajya Sabha. A bill can be introduced either by a minister or by a private member. In the former case it is known as a government bill and in the latter case it is known as a private member's bill. It is necessary for a member-in-charge of the bill to ask for the leave of the house to introduce the bill. If leave is granted by the house, the bill is introduced. This stage is known as the first reading of the bill. If the motion for leave to introduce a bill is opposed, the speaker may, in his discretion, allow a brief explanatory statement to be made by the member who opposes the motion and the member-in-charge who moved the motion. Where a motion for leave to introduce a bill is opposed on the ground that the bill initiates legislation outside the legislative competence of the house, the speaker may permit a full discussion thereon. Thereafter, the question is put to the vote of the house. However, the motion for leave to introduce a finance bill or an appropriation bill is forthwith put to the vote of the house.[10] Money/appropriation bills and financial bills can be introduced only in the Lok Sabha per Articles 109, 110 and 117. The Speaker of Lok Sabha decides whether a bill is a money bill or not. The vice-president of India, who is ex-officio Chairman of the Rajya Sabha, decides whether a bill is a money bill or not when the bill is introduced in the Rajya Sabha.[11]

#### Publication in the official gazette

After a bill has been introduced, it is published in The Gazette of India. Even before introduction, a bill might, be published in the Gazette on the permission of

the speaker. In such cases, leave to introduce the bill the house is not asked for and the bill is straight away introduced.

#### Reference of bill to the standing committee

After a bill has been introduced, the presiding officer of the concerned house (speaker of the Lok Sabha or the chairman of the Rajya Sabha or anyone acting on their behalf) can refer the bill to the concerned standing committee for examination and to prepare a report thereon. If a bill is referred to a standing committee, the committee shall consider the general principles and clauses of the bill referred to them and make a report thereon. The committee can also seek expert opinion or the public opinion of those interested in the measure. After the bill has thus been considered, the committee submits its report to the house. The report of the committee, being of persuasive value, shall be treated as considered advice.

#### Second reading

The second reading consists of consideration of the bill which occurs in two stages.

#### First stage

The first stage consists of general discussion on the bill as a whole when the principle underlying the bill is discussed. At this stage it is open to the house to refer the bill to a select committee of the house or a joint committee of the two houses or to circulate it for the purpose of eliciting opinion thereon or to straight away take it into consideration.

If a bill is referred to a select or joint committee, the committee considers the bill clause-by-clause just as the house does. Amendments can be moved to the various clauses by members of the committee. The committee can also take evidence of associations, public bodies or experts who are interested in the measure. After the bill has thus been considered, the committee submits its report to the house which considers the bill again as reported by the committee. If a bill is circulated for the purpose of eliciting public opinion thereon, such

opinions are obtained through the governments of the states and union territories. Opinions so received are laid on the table of the house and the next motion in regard to the bill must be for its reference to a select/joint committee. It is not ordinarily permissible at this stage to move the motion for consideration of the bill.

### Second stage

The second stage of the second reading consists of clause-by-clause consideration of the bill as introduced or as reported by select or joint committee. Discussion takes place on each clause of the bill and amendments to clauses can be moved at this stage. Amendments to a clause have been moved but not withdrawn are put to the vote of the house before the relevant clause is disposed of by the house. The amendments become part of the bill if they are accepted by a majority of members present and voting. After the clauses, the schedules if any, clause 1, the enacting formula and the long title of the bill have been adopted by the house, the second reading is deemed to be over.

### Third and the last reading

Thereafter, the member-in-charge can move that the bill be passed. This stage is known as the third reading of the bill. At this stage the debate is confined to arguments either in support or rejection of the bill without referring to the details thereof further than that are absolutely necessary. Only formal, verbal or consequential amendments are allowed to be moved at this stage. In passing an ordinary bill, a simple majority of members present and voting is necessary. But in the case of a bill to amend the Constitution, a majority of the total membership of the house and a majority of not less than two-thirds of the members present and voting is required in each house of Parliament.[10] If the number of votes in favour and against the bill are tied, then the presiding officer of the concerned house can cast his/her vote, referred to as a casting vote right.

## UNIT -IV

### Voting Decision

If at any time during a meeting of a house there is no quorum, which is a minimum of one-tenth of the total strength of a house, it is the duty of the chairman or speaker, or person acting as such, either to adjourn the house or to suspend the meeting until the quorum is met. The bills taken up under legislative power of Parliament are treated as passed provided majority of members present at that time approved the bill either by voting or voice vote. It is also the right of a member to demand voting instead of voice vote. In case of passing a constitutional amendment bill, two-thirds of the total members present and voted in favour of the bill with more than half of the total membership of a house present and voting in all, is required according to Article 368 of the Constitution.

### Joint session of both houses

#### Main article: Joint session

In case of a deadlock between the two houses or in a case where more than six months lapse in the other house, the President may summon, though is not bound to, a joint session of the two houses which is presided over by the Speaker of the Lok Sabha and the deadlock is resolved by simple majority. To date, only three bills - the Dowry Prohibition Act (1961), the Banking Service Commission Repeal Bill (1978) and the Prevention of Terrorist Activities Act (2002) have been passed at joint sessions.

### President's approval

When a bill has been passed by both houses following the described process, it is sent to the President for his approval per Article 111. The President can assent or withhold his assent to a bill or he can return a bill, other than a money bill which is recommended by the President himself to the houses. However Article 255 says that prior recommendation of the President or the Governor of a state wherever stipulated is not compulsory for an act of Parliament or of the legislature of a

state but the final consent of the President or Governor is mandatory. If the President is of the view that a particular bill passed under the legislative powers of Parliament violates the Constitution, he can return the bill with his recommendations to pass the bill under the constituent powers of Parliament following the Article 368 procedure. The President shall not withhold constitutional amendment bill duly passed by Parliament per Article 368. If the President gives his assent, the bill is published in The Gazette of India[15] and becomes an act from the date of his assent. If he withholds his assent, the bill is dropped, which is known as absolute veto. The President can exercise absolute veto on aid and advice of the Council of Ministers per Article 111 and Article 74.[16] The President may also effectively withhold his assent as per his own discretion, which is known as pocket veto. The pocket veto has only been exercised once by President Zail Singh in 1986, over the Postal Act which allowed the government to open postal letters without warrant by amending the Indian Post Office Act, 1898. If the President returns it for reconsideration, the Parliament must discuss once again, but if it is passed again and returned to the President, he must give his assent to it. If Parliament is not happy with the President for not assenting a bill passed by it under its legislative powers, the bill can be modified as a constitutional amendment bill and passed under its constituent powers for compelling the president to give assent. In case a constitutional amendment act is violating the basic structure of the Constitution, the constitutional bench of the Supreme Court would quash the act. When Parliament is of the view that the actions of the President are violating the Constitution, impeachment proceedings against the president could be taken up to remove him under Article 61 where at least two-thirds of the total membership of each house of Parliament should vote in favour of the impeachment when charges against the president are found valid in an investigation.

In case of a bill passed by the legislative assembly of a state, the consent of that state's governor has to be obtained. Some times the governor may refer the bill to the president anticipating clash between other central laws or constitution and decision of the president is final per Articles 200 and 201.



All decisions of the Union Cabinet are to be assented by the President for issuing gazette order. In case the Cabinet decisions are not in the purview of the established law, the President shall not give assent to the Cabinet decisions. He may indicate that the Union Cabinet has to pass the necessary legislation by the Parliament to clear the Cabinet decision. A minister is not supposed to take any decision without being considered by the Union Council of Ministers per Article 78(c).

The purpose of framing the Indian Constitution is to serve with honesty, efficiency and impartiality for the betterment of its citizens by the people who are heading or representing the independent institutions created by the Constitution such as judiciary, legislature, executive, etc. When one or more institutions are failing in their duty, the remaining shall normally take the lead in correcting the situation by using checks and balances as per the provisions available in the Constitution.

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Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**  
**Title: MOCK PARLIMENT**

**Test Exercise:**

- **Opening Address by the Prime Minister**
- **Opposition Leader's Response**
- **Bill Proposal - Education Reform**
- **Cabinet Minister's Defense of the Bill**

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Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**  
**Title: MOCK PARLIMENT**

**Key:**

1. **Speaker of the House:** The presiding officer of the legislative body who maintains order, enforces rules, and ensures fair debate.
2. **Prime Minister:** The head of government and leader of the ruling party or coalition.
3. **Leader of the Opposition:** The leader of the largest opposition party who presents alternative policies and critiques the government's actions.
4. **Cabinet Ministers:** Government officials responsible for specific areas, such as finance, education, health, or defense.
5. **Members of Parliament (MPs):** Elected representatives who debate and vote on legislation.
6. **Political Parties:** Organized groups of MPs who share similar ideologies and policy goals.

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Vuyyuru-521165, Krishna District, Andhra Pradesh

**Department of POLITICAL SCIENCE**

**Value Added Course**  
**Title: MOCK PARLIMENT**  
**Marks List**

Class: I.B.A

S. No	Roll No.	Name of the Student	Marks
1	2111001	V. Ashok Kumar	8
2	2111002	K. Ajay Kumar	6
3	2111004	T. Raja babu	7
4	2111005	V. Sai Dinesh	6
5	2111006	M. Ram	6
6	2111008	Reddy Raju	9
7	2111020	V. chandra teja	9
8	2111011	Sayyad biroj Basha	8
9	2111012	K. Aditya	7
10	2111013	P. Hussain Khan	7
11	2111014	K. Sri Jyostna	7
12	2111016	P. Pusitha	8
13	2111017	P. Siva Venkata Sukanya	9
14	2111018	S. Naga Lakshmi	9
15	2111019	T. Neelima	9

*Ch. Sandhya Devi*  
Head, Department of Political Science  
A.G. & S.G. Siddhartha Degree College  
(Autonomous), VUYURU - 521165

*[Signature]*  
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**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Department of POLITICAL SCIENCE**

**Value Added Course**  
**Title: MOCK PARLIMENT**  
**Marks List**

Class: I.B.A

S. No	Roll No.	Name of the Student	Marks
16	2111020	M. Anil kumar	7
17	2111022	S. kavya	9
18	2111023	M. Prasanthi	8
19	2111024	B. Prasanthi	9
20	2111025	V. Thuphan muneendra	8
21	2111026	D. Durga devi	9
22	2111027	K. Halleluya	8
23	2111029	Abdul. Mansoor	7
24	2111030	T. Deepika	6
25	2111031	Bandi. vinna	7
26	2111032	Ch. Nani	7
27	2111035	K. Raghava	6
28	2111036	P. Raja shekhar	9
29	2111038	G. Naga Abhinay	9
30	2111039	E. Lokesh	8

Ch. Sandhya Devi

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Vuyyuru-521165, Krishna District, Andhra Pradesh

**Department of POLITICAL SCIENCE**

**Value Added Course**  
**Title: MOCK PARLIMENT**  
**Marks List**

Class: I B.A

S. No	Roll No.	Name of the Student	Marks
31	2111040	Abdul. Habibulla	6
32	2111042	T. Tarun	6
33	2111043	v. Sandeep Kumar	7
34	2111044	I. Bhama	8
35	2111045	ch. Pradeep	7
36	2111046	v. Ravi Teja	8
37			
38			
39			
40			
41			
42			
43			
44			
45			

*Ch. Sandhya Devi*  
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*Shree*  
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Vuyyuru-521165, Krishna District, Andhra Pradesh

**Department of POLITICAL SCIENCE**

**Value Added Course**  
**Title: MOCK PARLIMENT**

**Feed Back Form**

1. Is the programme interested to you (Yes/No)
2. Have you attended all the session (Yes/No)
3. Is the content of the program is adequate (Yes/No)
4. Have the teacher covered the entire syllabus? (Yes/No)
5. Is the number of hours adequate? (Yes/No)
6. Do you have any suggestions for enhancing or reducing the number of weeks designed for the program? (Yes/No)
7. On the whole, is the program useful in terms of enriching your knowledge? (Yes/No)
8. Do you have any suggestions on the program? (Yes/No)

I. I B.A - 2111036 P. Rajashekhar

*Dr. Sandhya Devi*  
Head, Department of Political Science  
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(Autonomous), VUYURU - 521 165

*[Signature]*  
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Vuyyuru-521165, Krishna District, Andhra Pradesh

**Department of POLITICAL SCIENCE**

**Value Added Course**  
**Title: MOCK PARLIMENT**

**Feed Back Form**

1. Is the programme interested to you (Yes/No)
2. Have you attended all the session (Yes/No)
3. Is the content of the program is adequate (Yes/No)
4. Have the teacher covered the entire syllabus? (Yes/No)
5. Is the number of hours adequate? (Yes/No)
6. Do you have any suggestions for enhancing or reducing the number of weeks designed for the program? (Yes/No)
7. On the whole, is the program useful in terms of enriching your knowledge? (Yes/No)
8. Do you have any suggestions on the program? (Yes/No)

1. I.B.A - 2111024 - B. Prasanthi.

*Ch. Sandhya*  
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**A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course / Certificate Course - Attendance Register**

Class / Section: T. BA

Year: 2021-2022 Department of: Political Science

Paper: Value added course

Lecturer: Ch. Sandhya Devi

Sl. No	Roll No	Student Name	Category	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
1	2111001	V. Ashok Kumar		P	P	P	P	P	P	A	P	P	P	A	P	P	P	P	13
2	2111002	K. Ajay Kumar		P	P	P	P	P	P	P	A	P	P	P	A	A	P	P	12
3	2111004	T. Raja babu		P	P	P	P	P	P	P	P	P	P	A	P	A	P	P	13
4	2111005	V. Sai Dinesh		P	P	P	P	P	P	P	A	P	P	P	A	P	A	P	13
5	2111006	M. Ram		P	P	P	P	A	P	P	A	P	P	A	P	P	A	P	11
6	2111008	Reddy Raju		P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	14
7	2111010	V. Chandra Teja		P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	13
8	2111011	Sayyad Firoj Batha		P	P	P	P	A	P	P	P	A	P	P	P	A	P	P	12
9	2111012	K. Aditya		P	P	P	P	P	P	A	P	P	A	P	A	P	P	P	12
10	2111013	P. Hussain Khan		P	P	A	P	P	P	P	A	P	P	P	P	P	P	P	13
11	2111014	K. Sri Tyostna		P	P	P	A	A	P	P	A	P	P	P	P	P	P	P	12
12	2111016	P. Pusitha		P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	14
13	2111017	P. Sravan katasukanya		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
14	2111018	S. Naga lakshmi		P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	14
15	2111019	T. Neelma		P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	14

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Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course / Certificate Course - Attendance Register**

Class / Section: J.B.A

Year: 2021-2022 Department of: Political Science

Paper: Value added course Lecturer: Ch. Sandhya Rani

Sl. No	Roll No	Student Name	Category	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
16	2111020	M. Anil Kumar		P	P	P	P	P	A	P	P	P	P	A	P	P	A	P	12
17	2111022	S. Kavya		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
18	2111023	M. Prasantini		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
19	2111024	B. Prasantini		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
20	2111025	V. Thiruphanmurendran		P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	13
21	2111026	D. Durga devi		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
22	2111027	K. Halleluya		P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	13
23	2111029	Abdul. Mansoor		P	P	A	P	P	P	A	P	P	P	P	P	A	P	P	12
24	2111030	T. Deepika		P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	14
25	2111031	Baundi Vlonu		P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	13
26	2111032	Ch. Nani		P	P	P	P	P	A	P	P	P	P	A	P	P	P	A	12
27	2111035	K. Raghva		P	P	P	P	P	P	A	P	P	A	P	P	P	P	P	13
28	2111036	P. Raja Shekhar		P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	14
29	2111038	G. Naga Abhinay		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
30	2111039	E. Lokesh		P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	14

Ch. Sandhya Rani

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*Chait*

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Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course / Certificate Course - Attendance Register**

Class / Section: I-BA Year: 2021-2022 Department of: Political Science Paper: Value added course Lecturer: Ch. Sandhya Devi

Sl. No	Roll No	Student Name	Category	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
31	2111040	Abdul. Habibulla		P	P	P	P	A	P	P	A	P	P	P	P	A	P	P	12
32	2111042	T. Tarun		P	P	P	A	P	P	P	A	A	P	P	P	P	P	P	12
33	2111043	v. Sandeep Kumar		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15
34	2111044	T. Bhamee		P	P	P	P	P	P	P	P	A	A	P	P	A	P	P	14
35	2111045	Ch. Pradeep		P	P	P	P	P	P	P	P	A	A	P	P	A	P	P	12
36	2111046	v. Ravi Teja		P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	14

*Ch. Sandhya Devi*  
Head, Department of Political Science  
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*Sandeep*  
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Arts & Science (Autonomous), Vuyyuru



ADUSUMILLI GOPALAKRISHNAIAH AND SUGARCANE GROWERS  
SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE,  
(AUTONOMOUS) VUY YURU A.P  
(Accredited at "A" level by NAAC, Bengaluru)



## Department of Political Science

VALUE ADDED COURSE: **MOCK PARLIMENT**

### CERTIFICATE

This is to Certify that. *P. Rajashekhara* Son/Daughter of Shri/Smt *P. EDUKONDULU*  
has Successfully completed value added course in **MOCK PARLIMENT**  
Conducted by the Department of Political Science from 2-03-2022 to 5-04-2022 We wish him her bright future

*Ch. Sandhya Devi*  
Co-ordinator

*Ch. Sandhya Devi*  
Head of Department  
Head, Department of Political Science  
A.G. & S.G. Siddhartha Degree College  
(Autonomous), VUY YURU - 521 165

*Chauhan*  
Principal  
PRINCIPAL  
AG & SG Siddhartha Degree College of  
Arts & Science (Autonomous), Vuyyuru



Department of Zoology

Value Added Course

2021-2022

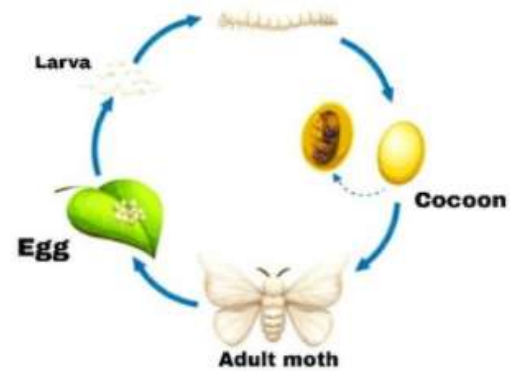
Title: General Sericulture mulberry Cultivation & Management

# Sericulture

Duration of Course : 30 Days

Course Code: VACZOO-05

Date: 22/03/2022 -14/05/2022



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Krishna District, Andhra Pradesh

(An Autonomous College in the Jurisdiction of Krishna University)

Accredited by NAAC with "A" Grade

ISO 9001:2015 Certified Institution

## **Value Added Course 2021-2022**



**DEPARTMENT OF ZOOLOGY**

## **Value Added Course**

**Title: GENERAL SERICULTURE, MULBERRY CULTIVATION AND MANAGEMENT**

Name of the Lecturer	:	D.A.Kiranmayee
Class	:	III B.Sc. BZC (TM & EM)
Duration of the Course	:	30 Days (22. 03.22 – 14.05 22)
VAC Code	:	VACZOO 05

# **A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

## **Value Added Course**

**Title: GENERAL SERICULTURE, MULBERRY CULTIVATION AND MANAGEMENT**

### **Objectives:**

- Motivating the farmers to plant high yielding mulberry varieties to increase income and productivity.
- Imparting training in mulberry cultivation, silkworm rearing and silk reeling.
- Assist in procurement of improved rearing equipment and construction of separate rearing house.
- Ensure supply of disease-free silkworm seeds.
- Enhance skill of farmers for increased cocoon productivity and to prevent silkworm diseases.
- Aid establish silk reeling units in the private sector.
- Aid establish drip irrigation system in mulberry gardens.
- Assist Seri culturists and reelers to dispose of their cocoon, silk etc., in regulated cocoon markets /silk exchange
- Facilitate sericulturists to adopt new technologies developed.

### **Outcomes:**

After successful completion of course, the student will be able to

CO1. gain knowledge to classify and label the morphological features of different varieties of mulberry.

CO2. able to apply the knowledge of ecological requirements for cultivation and propagation of mulberry.

CO3. able to know about **Mulberry management and** analyze the effectiveness of organic and inorganic fertilizers.

Co4 able to distinguish the intercultural activities, pruning methods and harvesting methods of mulberry leaf.

Co6 able to maintain the purity of the variety in each stage of egg incubation, larvae rearing, mounting, cocoon collection, moth emergence, and egg production.

**Methodology:** Teacher centred method

**Duration: 30 days (22.03.22-14.05.22)**

**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**

**Student Enrolment Sheet**


Class II B.Sc BZC (TM & EM)

S. No	Roll No.	Name of the Student	Signature
1	20-301	J.VENKATESH	J. Venkatesh.
2	20-302	J.PAVANI	J. Pavani
3	20-303	K.SRIVIDYA	K. Sri Vidya
4	20-304	A.BHUVANA	A. Bhuvana
5	20-305	G.KAVITHA	G. Kavitha
6	20-606	A.REVATHI	A. Revathi
7	20-307	B.LOKESWARI	B. Lokeswari
8	20-308	K.NAGA KAVITHA SRI	K.N. Kavitha Sri
9	20-309	G.SRAVANI	G. Sravani
10	20-310	K.KAVYA	K. KAVYA
11	20-311	N.MEGHANA KEERTHI	N. Meghana Keerthi
12	20-312	G.NAGA ASWINI	G. Naga Aswini
13	20-314	T.DURGA RAO	T. Durga Rao
14	20-316	D.J.N.V.A BHAVANI	D.J.N.V.A. Bhavani
15	20-317	K.MOUNIKA	K. Mounika
16	20-318	K.RAMYA SRI	K. Ramya Sri



17	20-319	J.SANDHYA	J. Sandhya
18	20-320	K.RAMA DEVI	K. Rama devi
19	20-501	D.MANI DEEPIKA	D. Mani Deepika
20	20-502	M.DEEPIKA	M. Deepika
21	20-503	B.NAGA DEVI	B. Naga devi
22	20-504	N.T.V.N.MAHESH BABU	N.T.V.N. Mahesh babu
23	20-505	A.BINDU MADHAVI	A. Bindu Madhavi
24	20-507	B.KIRAN DEEPTHI	B. Kiran deepthi
25	20-508	P.DAIVA SUNDHARA NIDHI	P. Daiva Sundhara Nidhi
26	20-509	V.K.V.VARSHITHA	V. K. V. Varshitha
27	20-510	G.UMA DEVI	G. Uma Devi
28	20-511	D.NAGA MOUNIKA	D. Naga mounika
29	20-513	Y.LAKSHMI CHERISHMA	Y. Lakshmi cherishma
30	20-514	P.YUVA KISHORE	P. YUVA KISHORE
31	20-516	P.HEMA	P. Hema
32	20-517	K.BEULAH	K. Beulah
33	20-518	P.ANITHA	P. Anitha

  
**PRINCIPAL**  
 AG & SG Siddhartha Degree College  
 Arts & Science (Autonomous), Vuyyuru

  
 Head, Department of Zoology,  
 AG & SG Siddhartha Degree College,  
 (Autonomous)  
 VUYYURU - 521 165.

# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Value Added Course

**Title:** GENERAL SERICULTURE, MULBERRY CULTIVATION AND MANAGEMENT

Date From to

Date	Content	Module No.
22.03.22 to 31.03.22	<b>Introduction</b> 1.1 Definition, history and present status of Sericulture 1.2 Types of silk worms and their food plants 1.3 Prospects of Sericulture in India - Sericulture industry in different states, employment, potential in mulberry and non-mulberry Sericulture	I
01.04.22 to 15.04.22	<b>Morphology of mulberry plant</b> 2.1 Common varieties of mulberry used in India 2.2 Characters of root, stem and leaf 2.3 Anatomy of root, stem and leaf 2.4 Male and female reproductive organs, pollination, fertilization, development of seed.	II
16.04.22 to 25.04.22	<b>Requirements for mulberry cultivation</b> 3.1 Physical and chemical properties of soil and its nature 3.2 Soil moisture and water requirements 3.3 Climatic conditions - Temperature, photoperiod, humidity and rain fall	III
26.04.22 to 02.05.22	<b>Mulberry management</b> 4.1 Land preparation - leveling and ploughing 4.2 Irrigation - drip, sprinkler or flood irrigation, weeding 4.3 Manuring - organic, inorganic and biofertilizers 4.4 Harvesting - leaf picking, shoot-leaf harvesting, branch cutting, leaf storage	IV
03.05.22 to 14.05.22	<b>Diseases and pests of mulberry</b> 5.1 Fungal and bacterial diseases - Powdery mildew, red rust and leaf spot caused by fungi Mulberry wilt caused by bacteria Symptoms; mechanical and chemical control 5.2 Nematode and mycoplasma diseases - Mulberry root-knot and mulberry root rot (nematode diseases), Mycoplasma and viral mulberry disease, Symptoms; mechanical and chemical control 5.3 Caterpillars - Bihar hairy caterpillar, semilooper Bugs - Leaf hoppers and scale insects Beetles - Girdle beetle, powder pest beetle.	V

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# **A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

## **Value Added Course**

**Title:GENERAL SERICULTURE, MULBERRY CULTIVATION AND MANAGEMENT**

### **Test Exercise:**

1. What is Sericulture?
2. What is Silk Made up of?
3. What is the Process Followed in Sericulture?
4. Explain about Moriculture?
5. Discuss about Silkworm Rearing?
6. Write an essay on Silk Reeling?
7. What are the common problems faced by farmers during sericulture?
- 8.. What are the Challenges Faced in Sericulture?
- 9.What is the importance of sericulture?
- 10.What are 5 uses of sericulture?

# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Value Added Course

### Key:

**Ans1.** Sericulture is the process of cultivating silkworms and extracting silk from them. The caterpillars of the domestic silkworm (also called 'Bombyx Mori') are the most commonly used silkworm species in sericulture. Other types of silkworms (such as Eri, Muga, and Tasar) are also cultivated for the production of 'wild silks'. An image detailing the different types of silkworms is provided below.

**Ans2.** Silk is a fiber made up two different proteins – sericin and fibroin. Approximately 80% of silk fiber is made up of fibroin, which is concentrated at the core. This core is surrounded by a layer of sericin (which makes up the remaining 20% of silk) The presence of pigments (such as xanthophyll) in the sericin layer of the fibre imparts colour to the silk. Each type of silk has a distinct colour, as tabulated below.

Type of Silk	Colour
Mulberry Silk	Yellow/Green
Eri Silk	Creamy-White/Brick-Red
Tasar Silk	Copper-Brown
Muga Silk	Golden

**Ans3.** For the production of mulberry silk, the sericulture process follows three primary steps.

- Moriculture – the cultivation of mulberry leaves.
- Silkworm rearing – promoting the growth of the silkworm.
- Silk reeling – the extraction of silk filaments from the silkworm cocoons.

Finally, the silk filaments are woven together to form a thread. These threads are often plied together to form a yarn.

**Ans4.** Moriculture refers to the cultivation of mulberry plants, whose leaves are used as silkworm feed. These plants can be grown via three different methods:

- Cultivation from seeds
- Root-grafting
- Stem grafting

The stem grafting method is the most commonly used method for mulberry plantation. Here, cuttings that are approximately 22 centimetres in length, containing at least 3 buds, are extracted

from the stem of a mature mulberry plant. These cuttings may be directly planted or first kept in nurseries and then transplanted.

The mulberry leaves can be harvested from the plants via the following methods:

- Leaf picking – the removal of individual leaves by hand.
- Branch cutting – removal of the entire branch.
- Top shoot harvesting – removal of the mulberry shoot tops.

It is interesting to note that 1 kilogram of mulberry leaves can feed approximately 50 silkworms (from the egg stage to the cocoon stage).

**Ans5.** In sericulture, the silkworm rearing process begins with the laying of eggs by the female silk moth. Typically, 300-500 eggs are obtained from one female silk moth. These eggs (laid on a paper/cardboard sheet) are then disinfected with the help of a 2% formalin solution.

A feeding bed is prepared on a rearing tray by sprinkling chopped mulberry leaves onto it. The hatched larvae are transferred into this tray via a process known as brushing. In order to maintain humidity, foam strips are soaked in water and placed on the tray.

The silkworm larvae initially have a good appetite. As they grow, their appetite slowly diminishes until their active stage. At this stage, the silkworm eats enthusiastically until its final feeding stage.

After reaching maturity, the larvae begin searching for hospitable places to begin their pupation. At this stage, the body of the silkworm shrinks and becomes translucent. These mature larvae now wrap themselves in a cocoon by secreting saliva from the two salivary glands on their heads. This saliva solidifies and becomes silk when it comes in contact with air. Generally, the cocoon is spun in 2-3 days. However, some varieties of silkworms can take up to 4 days to spin their cocoons.

**Ans6.** Inside the cocoons, the larvae undergo **metamorphosis** and turn into pupae. The harvesting of silk from these cocoons is the final stage of sericulture. First, the pupae inside the cocoon are killed by boiling the cocoon and exposing it to steam and dry heat. This process is called stifling.

Now, the silk filaments are removed from the dead cocoon via a process called reeling. When the cocoons are placed in boiling water for approximately 15 minutes, the adhesion of the silk threads reduces, enabling the separation of individual filaments. These filaments are twisted into a thread with the help of a series of guides and pulleys. This silk is then re-boiled in order to improve its lustre.

one thread of silk contains approximately 50 silk filaments. However, over 900 meters of filament can be obtained from a single cocoon. Thus, raw silk is obtained from the silkworm and the sericulture process is completed.

### **Trivia**

- The boiling of silkworm cocoons in the sericulture process has come under severe criticism from several individuals and organizations.
- Mahatma Gandhi actively promoted the use of Ahimsa silk (or peace silk). This method of producing silk did not involve the boiling of silkworm pupae and, therefore, did not violate the Ahimsa philosophy.

- Campaigns have been formed to protest against the inhumane treatment of silkworms by the People for the Ethical Treatment of Animals (PETA).

**Ans7.** Diseases can affect the eggs and destroy them, the infection may result in the shrinkage of larvae bodies, insufficient technical skills may result in low-quality silk, and insufficient silkworm production – these are some of the common problems faced in sericulture.

To learn more about sericulture and other related concepts, such as the **life cycle of the silkworm**, register with BYJU’S and download the mobile application on your smartphone.

**Ans8.** Silk farmers practicing sericulture are met with several challenges that could potentially destroy their harvest. They are also prone to many **health hazards**. Silkworms are vulnerable to several diseases such as pebrine and flacherie. Also, several pests threaten the healthy growth of silkworm larvae. Some important challenges faced in sericulture are listed below.

- The pebrine disease can infect the eggs, resulting in their death before the hatching of the larvae. Any larvae affected by this disease develop dark spots and become lethargic.
- Viral infections in the larvae may result in the shrinkage of their bodies. They may also start giving off an unpleasant odour.
- Other viral infections such as cytoplasmic polyhedrosis can cause the larvae to lose their appetites.
- The muscardine infection, caused by fungi, can cause the larvae to become extremely feeble and eventually die.
- The larvae of dermestid the beetlesnotepad
- can bore into the silkworm cocoons and eat the pupae. Silk cannot be reeled from these damaged cocoons.
- Some mites produce a toxic substance that kills silkworms.

**Ans9.** Sericulture offers self-employment opportunities to educated unemployed youth in different sectors. Many by-products can also be produced from sericulture activities. Moreover, Mulberry and silkworm have pharmaceutical values in the world

**Ans10.** It is used in **clothing, upholsteries, surgical sutures, beddings, parachutes, etc.** Sericulture is the cultivation of silkworms for harvesting silk. This article will look closer at the impact of sericulture on economy, environment, and society.0

\*\*\*\*\*

Department of Zoology. - 2021-2022.  
Value Added Course  
Student List.

18

S.No	Reg. No	Category	Name of the Student	Marks 50	certificate issued & Signature
1)	21-901	BC-D	V. BHANU PRAKASH	45	V. Bhanu Prakash
2	902	BC-D	A VIJAYALAKSHMI	48	A. VIJAYALAKSHMI
3	905	BC-D	K. HEMANTH	47	K. Hemanth
4	908	BCE	M. SUFIYA	48	Md. Sufiya.
5	910	SC	CH. PUSHPARAJU	46	Ch. Pushpa Raju
6	911	OC	V.J.S. VARDHAN	46	v.j.s.vardhan
7	912		A. NAGESWARI	40	
8	913	OC	N. GREESHMITHA	46	N. Greeshmitha.
9	914	OC	P. ANJALI	45	P. Anjali
10	915	Sc	K. MOUNIKA	47	K. Mounika
11	917	Sc	K. AKHILA	48	K. Akhila
12	919	BCE	S.SAMEENATHASILEEM	48	sk sameena Tasleem.
13	920	Sc	M. DURGA RANI	47	M. Durga Rani
14	924	BC-D	K. VENKATA GOPI	45	K.V. Gopi
15	925	SC	K. SWAPNA	48	K. Swapna
16	926	SC	K. VARUN	46	K. Varun.
17	927	SC	K. BHARGAVI	47	K. Bhargavi
18	928	SC	N. SAI TEJA	48	N. Saiteja
19	929	SC	S. NANDINI	49	S. Nandini
20	930	BC-C	Y. ABHIGAILU	49	Y. Abhigailu
21	917	Sc	Jc		

BALU

Head, Department of Zoology,  
AG & SG Siddhartha Degree College,  
(Autonomous)  
VUYURU - 521 165.

INTERNAL AUDIT  
IOAC  
AG & SG Degree College  
VUYURU - 521 165

**A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

**Department of ZOOLOGY**

**Value Added Course**

**Title: GENERAL SERICULTURE, MULBERRY CULTIVATION AND MANAGEMENT**

**Feed Back Form**

1. Is the programme interested to you ✓  
(Yes/No)
2. Have you attended all the session ✓  
(Yes/No)
3. Is the content of the program is adequate ✓  
(Yes/No)
4. Have the teacher covered the entire syllabus? ✓  
(Yes/No)
5. Is the number of hours adequate? ✓  
(Yes/No)
6. Do you have any suggestions for enhancing or reducing the number of weeks designed for the program? ✓  
(Yes/No)
7. On the whole, is the program useful in terms of enriching your knowledge? ✓  
(Yes/No)
8. Do you have any suggestions on the program? ✓  
(Yes/No)

J. Venkatesh - 20-301

II. BSc (T.M)

*J. Venkatesh*  
PRINCIPAL

AG & SG Siddhartha Degree College of  
Arts & Science (Autonomous), Vuyyuru

*D. A. Laxmanmayee*  
Head, Department of Zoology,  
AG & SG Siddhartha Degree College,  
(Autonomous)  
VUYYURU - 521 165.



**A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

**Department of ZOOLOGY**

**Value Added Course**

**Title: GENERAL SERICULTURE, MULBERRY CULTIVATION AND MANAGEMENT**

**Feed Back Form**

1. Is the programme interested to you ✓  
(Yes/No)
2. Have you attended all the session ✓  
(Yes/No)
3. Is the content of the program is adequate ✓  
(Yes/No)
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(Yes/No)
7. On the whole, is the program useful in terms of enriching your knowledge? ✓  
(Yes/No)
8. Do you have any suggestions on the program? ✓  
(Yes/No)

G. Sravani (20-309)  
II-B-2-C (T-M)

*Chaver*  
PRINCIPAL

AG & SG Siddhartha Degree College of  
Arts & Science (Autonomous), Vuyyuru

*W. A. Lakshminarayana*

Head, Department of Zoology,  
AG & SG Siddhartha Degree College,  
(Autonomous)  
VUYYURU - 521 165.







**AG & SG SIDDHARTHA DEGREE  
COLLEGE OF ARTS & SCIENCE  
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Re Accredited with Grade 'A' by NAAC, Bangalore  
vuyyuru - 521256, Krishna Dist..A.P



*This is to certify....K. AKHILA.....of J.A.B.C has  
successfully completed the certificate course in **Sericulture**  
organized by the department of zoology during the year 2021- 2022  
in association with IQAC and passed the examination in grade 'A'.*

*S. A. Kiranmayee*  
**Course Coordinator**

Head, Department of Zoology,  
AG & SG Siddhartha Degree College,  
(Autonomous)  
VUYYURU - 521 165.

*[Signature]*  
**Principal**  
PRINCIPAL

AG & SG Siddhartha Degree College of  
Arts & Science (Autonomous), Vuyyuru

**2021 - 2022**

**Sericulture**



**AG & SG SIDDHARTHA DEGREE  
COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)**

Re Accredited with Grade 'A' by NAAC, Bangalore  
vuyyuru - 521256, Krishna Dist., A.P

**CERTIFICATE**

*This is to certify... **K. HEMANTH**..... of **I. A.B.C** has  
successfully completed the certificate course in **Sericulture**  
organized by the department of zoology during the year 2021- 2022  
in association with IQAC and passed the examination in grade.. **A!***

*S. A. Laxmanmayal*  
**Course Coordinator**

*[Signature]*  
**Principal**

Head, Department of Zoology,  
AG & SG Siddhartha Degree College,  
(Autonomous)

VUYYURU - 521 165.

PRINCIPAL

AG & SG Siddhartha Degree College of  
Arts & Science (Autonomous), Vuyyuru

**2021 - 2022**

**Sericulture**



**AdusumilliGopalakrishnaiah & Sugarcane Growers  
Siddhartha Degree College of Arts and Science**

**Autonomous College**

**NAAC 'A' Grade College**

**Vuyyuru, Krishna (Dt), Andhra Pradesh-521165**

## **VALUE ADDED COURSE**

**TITLE: TRAVEL & TOURISM**

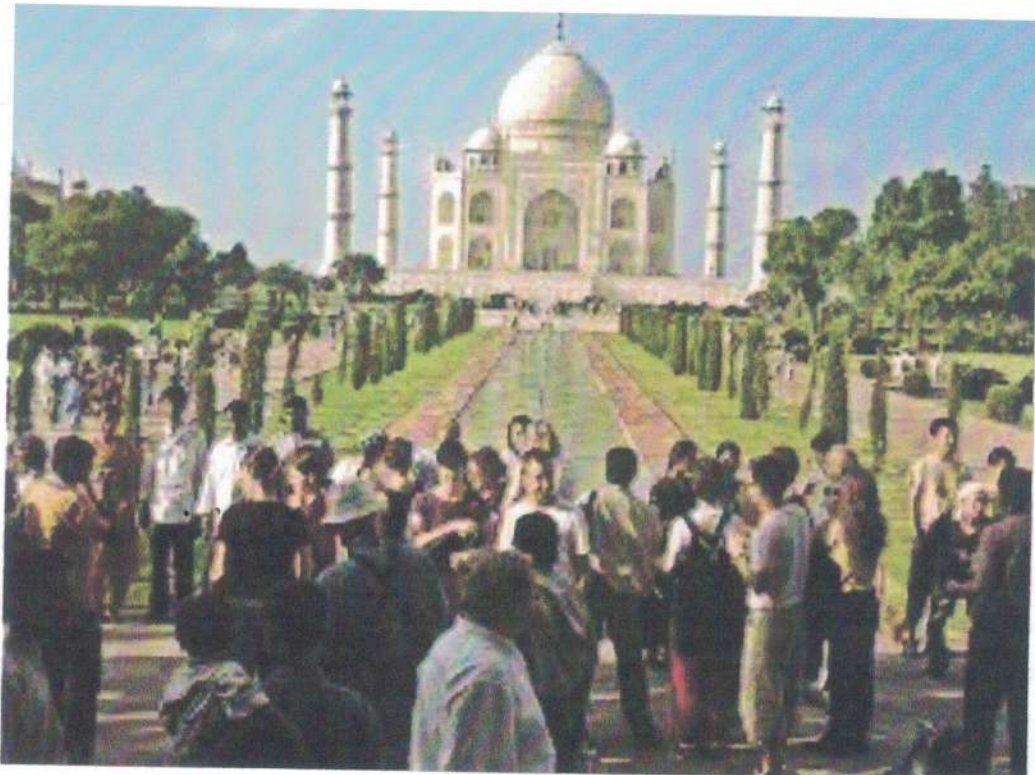
**VAC CODE: HIS-TT-01**

**On 16<sup>th</sup> June, 2022 TO 30<sup>th</sup> July 2022**

**Duration of the Course: 30Hrs**

**Organized By**

**Department of History**



**A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

(Managed by: Siddhartha Academy of General & Technical Education, Vijayawada-10)

An Autonomous College in the Jurisdiction of Krishna University

Accredited by NAAC with "A" Grade

ISO 9001:2015 Certified Institution



**DEPARTMENT OF HISTORY**

**Value Added Course  
Title: Travel & Tourism**

Name of the Lecturer	:	THOTA NARASIMHA RAO
Class	:	I B.A.
Duration of the Course	:	30 HOURS
VAC Code	:	HIS-TT-01

# **A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

## **Value Added Course**

### **Title: Travel & Tourism**

- Objectives : 1) Familiarize students with the basic concepts of travel and tourism
- 2) Discuss the terminology used
- 3) Give an insight into how travel and tourism evolved over a period of time and reached the modern stage.

Methodology : Teacher - Centered method

Duration : 30 Hours



## **A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

### **Value Added Course**

### **Title: Travel & Tourism**

**Date** 16-6-2022 TO 30-7-2022

Date	Content	Module No.
16-6-2022 TO 22-6-2022	<b><u>Concepts of Tourism and Travel</u></b> Development of Tourism Through Ages: Early and Medieval Period of Travel- Modes of Transports and Accommodation, Renaissance and its Effects on Tourism	I
23-6-2022 TO 4-7-2022	<b><u>Tourism and Its Theories</u></b> Tourism and Its Theories: Meaning and Definitions, Characteristics of Tourism, Need for Measurement of Tourism, Interdisciplinary Approaches	II
5-7-2022 TO 16-7-2022	<b><u>Travel Behaviour &amp; Motivations</u></b> Travel Behaviour & Motivations: Origin of Travel Motivation, Meaning of Motivation & Behaviour, Theory of Travel Motivations, Typology of Tourists	III
18-7-2022 TO 30-7-2022	<b><u>Tourism Organizations</u></b> Tourism Organizations: Roles and Functions of United Nations World Tourism Organization (WTO), Pacific Asia Travel Association (PATA)	IV

**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**  
**Student Enrolment Sheet**

Class: I<sup>st</sup> BA

S. No	Roll No.	Name of the Student	Signature
1	2111001	Veeranki. Ashok kumar	V. Ashok kumar
2	2111002	Kancharla. Ajay kumar	K. Ajay kumar
3	2111004	Immadi. Raja Babu	I. Raja babu
4	2111008	Reddy Raju	R. Raju
5	2111010	Vemuluri. Chandra Teja	V. Chandra Teja
6	2111012	Kanumuri. Aditya	K. Aditya
7	2111017	Pandi Siva Venkata. Sukanya	P.S.V. Sukanya
8	2111019	Thumati. Neelima	T. Neelima
9	2111022	Suvarnaganti. Kavya	S. Kavya
10	2111024	Bezawada. Prashanthi	B. Prashanthi
11	2111025	Vampugani Thuphan. Munendra	V.T. Munendra
12	2111026	Dalli. Durga Devi	D. Durga Devi
13	2111027	Kondaveeti. Halleluya	K. Halleluya
14	2111031	Bandi. Vinnu	B. Vinnu
15	2111038	Gamidi. Naga Abhinay.	G. Naga Abhinay

T. Nagesh M.



PRINCIPAL

AG & SG Siddhartha Degree College of  
Arts & Science (Autonomous), V.





**A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**  
**Title: Travel & Tourism**

08  
10

Test Exercise: 2111031, B. Vinnu

1. WHO WAS THE FOUNDER OF INCLUSIVE TOUR? *Thomas Cook*
2. THE WRIGHT BROTHERS INVENTED THE AEROPLANE IN ---- *1903*
3. ---- TOURISM INVOLVES PEOPLE TRAVEL WITHIN THE COUNTRY *DOMESTIC tourism*
4. THE PEAK SEASON OF INTERNATIONAL TOURISM IN INDIA *oct to m*
5. The famous traveller who wrote air travel experience in ancient time *Inbu batuta*
6. Travelling for the purpose of learning about cultures or aspects of cultures is *Cultural Tourism*
7. Eco-Tourist is interested to visit a destination where there is *Relatively unspolit natural environment*
8. Secretary-General of General Assembly of World Tourism Organization was elected in every *four year*
9. Headquarter of World Tourism Organization is situated in *Spain*
10. International organization which is responsible for environmental sustainability and promotes tourism as a

**Value Added Course**  
**Title: Travel & Tourism**

08  
10

Test Exercise: 2111031, B. Vinnu

1. WHO WAS THE FOUNDER OF INCLUSIVE TOUR? *Thomas Cook*
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4. THE PEAK SEASON OF INTERNATIONAL TOURISM IN INDIA *oct to m*
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6. Travelling for the purpose of learning about cultures or aspects of cultures is *Cultural Tourism*
7. Eco-Tourist is interested to visit a destination where there is *Relatively unspoilt natural environment*
8. Secretary-General of General Assembly of World Tourism Organization was elected in every *four years*
9. Headquarter of World Tourism Organization is situated in *Spain*
10. International organization which is responsible for environmental sustainability and promotes tourism as a driver of economic growth is classified as *World tourism organization*

*T. Narasimha*

**A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**  
**Title: Travel & Tourism**

08  
10

Test Exercise: 21/10/26 D. Durga Devi

1. WHO WAS THE FOUNDER OF INCLUSIVE TOUR? Thomas Cook
2. THE WRIGHT BROTHERS INVENTED THE AEROPLANE IN ---- 1903
3. ---- TOURISM INVOLVES PEOPLE TRAVEL WITHIN THE COUNTRY Domestic Tourism
4. THE PEAK SEASON OF INTERNATIONAL TOURISM IN INDIA Oct and
5. The famous traveller who wrote air travel experience in ancient time Ibnu battuta
6. Travelling for the purpose of learning about cultures or aspects of cultures is cultural tourism
7. Eco-Tourist is interested to visit a destination where there is relatively unspoilt natural environment
8. Secretary-General of General Assembly of World Tourism Organization was elected in every six years
9. Headquarter of World Tourism Organization is situated in Spain
10. International organization which is responsible for environmental sustainability and promotes tourism as a driver of economic growth is classified as World Tourism Organization

T. Narasimha

**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**  
**Title: Travel & Tourism**

**Key:**

1. **THOMAS COOK**
2. **1903**
3. **DOMESTIC TOURISM**
4. **OCT TO MARCH**
5. **ibnu batuta**
6. **cultural tourism**
7. **relatively unspoilt natural environment**
8. **Four year**
9. **Spain**
10. **World Tourism Organization**



# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Department of HISTORY

### Value Added Course

### Title: Travel & Tourism

### Marks List

Class: 1<sup>st</sup> BA

S. No	Roll No.	Name of the Student	Marks
1	2111001	Veeranki. Ashok kumar	09
2	2111002	Kancharla. Ajay kumar	08
3	2111004	Immadi. Raja Babu	10
4	2111008	Reddy Raju	09
5	2111010	Vemuluri. chandra Teja	08
6	2111012	Kanumuri. Aditya	10
7	2111017	Pandi Siva Venkata. Sukanya	10
8	2111019	Thumati. Neelima	09
9	2111022	Suvarnaganti. kavya	10
10	2111024	Bezawada. Prashanthi	10
11	2111025	Vampigani. Thuphan Munendra	09
12	2111026	Ralli. Durga Devi	08
13	2111027	Kondaveeti. Halleluya	10
14	2111031	Bandi. Vinu	08
15	2111038	Gamidi. Naga Abhinay	10

*Chaver*  
PRINCIPAL

**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Department of HISTORY**

**Value Added Course**  
**Title: Travel & Tourism**

**Title:** p.s.v. Sukanya 2111017

**Feed Back Form**

1. Is the programme interested to you ✓  
(Yes/No)
2. Have you attended all the session ✓  
(Yes/No)
3. Is the content of the program is adequate ✓  
(Yes/No)
4. Have the teacher covered the entire syllabus? ✓  
(Yes/No)
5. Is the number of hours adequate? ✓  
(Yes/No)
6. Do you have any suggestions for enhancing or reducing the number of weeks designed for the program? ✓  
(Yes/No)
7. On the whole, is the program useful in terms of enriching your knowledge? ✓  
(Yes/No)
8. Do you have any suggestions on the program? ✓  
(Yes/No)

**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Department of HISTORY**

**Value Added Course**  
**Title: Travel & Tourism**

Student Name:- B. Prashanthi - 2111024

**Feed Back Form**

1. Is the programme interested to you (Yes/No) ✓
2. Have you attended all the session (Yes/No) ✓
3. Is the content of the program is adequate (Yes/No) ✓
4. Have the teacher covered the entire syllabus? (Yes/No) ✓
5. Is the number of hours adequate? (Yes/No) ✓
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8. Do you have any suggestions on the program? (Yes/No) ✓

# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Value Added Course / Certificate Course - Attendance Register

Class / Section: 1st BA

Year : 2022

Department of: History

Paper: Value Added Course Lecturer: T. Narasimha Rao

Sl. No	Roll No	Student Name	Category	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
1	2111001	Veeranki. Ashok kumar	BCB	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	18
2	2111002	Kancharla. Ajay kumar	BCB	P	P	P	A	P	P	P	P	P	P	P	P	A	P	P	18
3	2111004	Immodi. Raja Babu	BCD	P	P	P	P	P	A	P	P	P	P	P	P	P	A	P	18
4	2111008	Reddy. Raju	BCD	P	P	A	P	P	P	P	P	P	P	A	P	P	P	P	18
5	2111010	Vemuluri. chandra Teja	BCA	P	P	P	P	P	P	A	P	P	P	P	A	P	P	P	18
6	2111012	Kanumuri. Aditya	BCA	P	P	P	A	P	P	P	P	P	P	A	P	P	P	P	18
7	2111014	Pandi. Siva Venkata Sukanya	BCD	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	18
8	2111019	Thumati. Neelima	SC	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	18
9	2111022	Suvarnaganti. kavya	BCB	P	P	P	P	A	P	P	P	P	P	P	A	P	P	P	18
10	2111024	Bezawada. Prashanthi	OC	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	18
11	2111025	Vampugani. Thuphan Munendra	SC	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	18
12	2111026	Dalli. Durga Devi	BCA	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	18
13	2111027	Kondaveeti. Halleluya	SC	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	18
14	2111031	Bandi. Vinnu	SC	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	18
15	2111038	Gamidi. Naga Abhinay	OC	P	P	P	A	P	P	P	P	P	P	P	A	P	P	P	18

*(Signature)*

PRINCIPAL

AG & SG Siddhartha Degree College of  
Science (Autonomous), Vuyyuru

*(Signature)*

# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Value Added Course / Certificate Course - Attendance Register

Class / Section: 1st BA

Year : 2022

Department of: History

Paper: Value Added Course Lecturer: T. Narasimha Rao

Sl. No	Roll No	Student Name	Category	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
1	2111001	Veeranki. Ashok kumar	BCB	P	P	P	A	P	P	P	P	P	A	A	P	P	P	P	17
2	2111002	Kancharla. Ajay kumar	BCB	P	A	P	P	P	P	P	A	P	P	P	P	P	A	P	17
3	2111003	Immadi. Raja Babu	BCD	P	P	P	P	A	P	P	P	P	P	A	P	A	P	P	17
4	2111004	Reddy Raju	BCD	P	P	P	P	P	P	A	P	P	P	P	A	P	P	P	18
5	2111010	Vemuluri. Shandra Teja	BCA	P	P	P	A	P	P	P	P	P	P	A	P	P	P	P	18
6	2111012	Kanumuri. Aditya	BCA	P	A	P	P	P	P	P	A	P	P	A	P	P	P	P	17
7	2111017	Pandi Siva Venkata. Sukanya	BCD	P	P	P	P	A	P	P	P	P	A	P	P	P	P	P	18
8	2111019	Thumati. Neelima	SC	P	P	P	P	P	A	P	P	P	A	P	P	P	P	P	18
9	2111022	Suvarnaganti. Kavya	BCB	P	P	P	P	P	P	P	P	P	P	P	A	P	A	P	18
10	2111024	Bezawada. Prashanthi	OC	P	P	P	P	P	A	P	P	P	P	P	P	A	P	P	18
11	2111025	Vampugani. Thuphan Munendra	SC	P	P	P	P	A	P	P	P	P	A	P	P	P	P	P	18
12	2111026	Dalli. Durga Devi	BCA	P	P	P	A	P	P	P	P	A	A	P	P	P	P	P	17
13	2111027	Kondaveeti. Halleluya	SC	P	P	P	P	P	A	P	P	P	P	A	P	P	P	P	18
14	2111031	Bandi. Vinnu	SC	P	P	P	P	P	P	A	P	P	P	P	A	P	P	P	18
15	2111038	Giamidi. Naga Abhinay	OC	P	P	P	A	P	P	P	P	P	P	A	P	P	P	P	18

*(Signature)*

PRINCIPAL

AG & SG Siddhartha Degree College of  
Arts & Science (Autonomous), Vuyyuru

*(Signature)*

A syllabus for a course on Travel and Tourism may vary depending on the level of education (e.g., high school, college, or vocational training) and the specific goals of the course. However, I can provide you with a general outline of topics and concepts that are typically covered in a Travel and Tourism course. Feel free to adapt and modify this syllabus to suit your needs:

**Course Title:** Travel and Tourism

**Course Description:** This course provides an overview of the travel and tourism industry, including its history, components, and impact on the global economy. Students will explore various aspects of travel planning, customer service, cultural awareness, and sustainable tourism practices.

**Course Duration:** Typically, a Travel and Tourism course can be offered as a semester-long or full-year course.

**Course Objectives:**

1. Understand the history and evolution of the travel and tourism industry.
2. Identify key components of the tourism industry, including transportation, accommodation, and attractions.
3. Develop skills in travel planning and itinerary creation.
4. Explore cultural awareness and its importance in tourism.
5. Learn about customer service and communication in the tourism industry.
6. Discuss the environmental and ethical considerations in sustainable tourism.
7. Analyze current trends and challenges in the travel and tourism industry.

**Week-by-Week Outline:**

**Week 1-2:** Introduction to Travel and Tourism

- History and evolution of tourism
- The significance of tourism in the global economy

**Week 3-4:** Components of the Tourism Industry

- Transportation (airlines, trains, cruises)
- Accommodation (hotels, resorts, vacation rentals)
- Attractions and activities

**Week 5-6:** Travel Planning and Itinerary Creation

- Researching destinations
- Creating travel itineraries
- Budgeting and cost considerations

#### **Week 7-8: Cultural Awareness in Tourism**

- Understanding cultural differences
- Cultural sensitivity and respect
- Promoting cultural exchange in tourism

#### **Week 9-10: Customer Service in Tourism**

- Customer service skills
- Handling customer inquiries and complaints
- Building positive customer relationships

#### **Week 11-12: Sustainable Tourism**

- Environmental impacts of tourism
- Ethical considerations in tourism
- Sustainable tourism practices and certifications

#### **Week 13-14: Trends and Challenges in Tourism**

- Emerging trends in the travel and tourism industry
- Challenges such as over-tourism and pandemic-related issues
- Future prospects and career opportunities in tourism

#### **Assessment Methods:**

1. Quizzes and Tests
2. Travel Itinerary Projects
3. Group Discussions and Presentations
4. Research Papers on Sustainable Tourism
5. Final Exam

**Grading:** Grades will be based on a combination of assignments, quizzes, projects, and participation. The specific grading scale and weighting of each assessment method should be determined by the instructor.

## **Recommended Textbooks:**

1. "Introduction to Travel and Tourism" by Annette Pritchard and Nigel Morgan
2. "Tourism: Principles and Practice" by John Fletcher, Alan Fyall, and David Gilbert
3. "Cultural Tourism" by Milena Ivanovic and Nina Prebensen

Note: This syllabus is a general guideline and can be adapted to suit the specific needs and goals of the course, as well as the level of education and the duration of the course. Additionally, it's important to stay updated with industry trends and incorporate real-world examples and case studies into the curriculum for a more engaging learning experience.

## Components of the Tourism Industry

### ChatGPT

The tourism industry is composed of several key components that work together to create travel experiences for individuals and groups. These components include:

#### **1. Transportation:**

- **Airlines:** Commercial airlines provide both domestic and international flights, making air travel one of the most common modes of transportation for tourists.
- **Railways:** Trains are often used for scenic journeys and city-to-city travel, particularly in regions with extensive rail networks.
- **Cruises:** Cruise lines offer ocean and river cruises, allowing passengers to visit multiple destinations on a single voyage.
- **Buses and Coaches:** Buses and coaches provide land-based transportation for group tours and local travel within destinations.

#### **2. Accommodation:**

- **Hotels:** From luxury resorts to budget-friendly motels, hotels offer a wide range of lodging options to suit various preferences and budgets.



- **Resorts:** Resorts often provide comprehensive amenities, including restaurants, spas, and recreational activities, making them a destination in themselves.
- **Vacation Rentals:** Private residences, apartments, and vacation homes can be rented through platforms like Airbnb and Vrbo.
- **Hostels:** Hostels are budget-friendly accommodations that cater to backpackers and budget-conscious travelers.

### **3. Attractions and Activities:**

- **Natural Attractions:** National parks, beaches, mountains, and wildlife reserves are examples of natural attractions that draw tourists.
- **Cultural Attractions:** Museums, historical sites, monuments, and cultural festivals showcase a destination's heritage.
- **Entertainment:** Theme parks, theaters, concerts, and sports events provide entertainment options for tourists.
- **Outdoor Activities:** Activities such as hiking, skiing, water sports, and adventure tours cater to outdoor enthusiasts.

### **4. Food and Dining:**

- **Restaurants:** Local eateries, fine dining establishments, and street food vendors offer a variety of culinary experiences.
- **Culinary Tourism:** Food and beverage tours, cooking classes, and food festivals allow tourists to explore a destination's cuisine.

### **5. Travel Agencies and Tour Operators:**

- **Travel Agencies:** Travel agencies help travelers plan and book their trips, including flights, accommodations, and tours.
- **Tour Operators:** Tour operators create packaged tours with itineraries that include transportation, accommodations, and guided activities.

### **6. Tour Guides and Tourism Services:**

- **Tour Guides:** Knowledgeable guides provide insights and information to enhance the tourist experience during guided tours.

- **Tourism Services:** These include services such as airport transfers, ticket booking, and travel insurance.

#### **7. Hospitality and Customer Service:**

- Customer service is crucial in the tourism industry, encompassing the quality of service provided by hotels, restaurants, and other tourism-related businesses.

#### **8. Travel Technology:**

- **Online Booking Platforms:** Websites and mobile apps facilitate the booking of flights, accommodations, and activities.
- **Global Distribution Systems (GDS):** These systems connect travel providers with travel agencies and enable reservations.
- **Travel Review Sites:** Platforms like TripAdvisor and Yelp allow travelers to share their experiences and read reviews of destinations and businesses.

#### **9. Government Tourism Offices and Regulations:**

- Government bodies oversee tourism and may promote destinations, set industry regulations, and establish visitor information centers.

#### **10. Supporting Services:**

- Currency exchange, transportation services (e.g., rental cars), travel insurance, and medical services are essential for travelers.

These components collectively create the infrastructure that supports the travel and tourism industry, allowing tourists to explore new destinations and experience different cultures.

### **Travel Planning and Itinerary Creation**

#### **ChatGPT**

Travel planning and itinerary creation are essential aspects of the tourism industry, ensuring that travelers have well-organized and enjoyable experiences during their trips. Here are the key steps and considerations for effective travel planning and itinerary creation:

#### **1. Define the Purpose of the Trip:**

- Determine whether the trip is for leisure, business, cultural exploration, adventure, relaxation, or a combination of these.

## **2. Choose the Destination:**

- Research potential destinations based on the purpose of the trip, budget, interests, and any specific preferences.

## **3. Set a Budget:**

- Establish a realistic budget for the entire trip, including transportation, accommodation, meals, activities, and miscellaneous expenses.

## **4. Determine the Duration:**

- Decide how long the trip will last, taking into account available vacation days or business commitments.

## **5. Research and Gather Information:**

- Collect information about the chosen destination, including visa requirements, local customs, safety tips, and any travel advisories.

## **6. Create a Travel Itinerary:**

a. **Select Key Activities and Attractions:** - Identify the must-see attractions, activities, and experiences at the destination. - Consider the interests and preferences of the travelers.

b. **Plan Daily Schedules:** - Break down the trip into days or segments. - Allocate time for each activity or attraction. - Allow for flexibility in case of unexpected delays or opportunities.

c. **Balance Activities:** - Mix leisure time with cultural experiences, adventure activities, and relaxation. - Avoid overloading the itinerary, leaving time for relaxation and exploration.

d. **Consider Logistics:** - Arrange transportation between locations and activities. - Include details such as opening hours, ticket prices, and reservation requirements.

e. **Accommodations:** - Choose and book accommodations based on location, budget, and traveler preferences. - Include check-in and check-out times.

f. **Dining:** - Plan meals, considering local cuisine and dietary preferences. - Include reservations at popular restaurants, if necessary.

**g. Travel Documents and Essentials:** - Ensure all necessary travel documents (e.g., passports, visas, ID cards) are up to date. - Pack essential items such as medications, travel adapters, and travel insurance information.

**h. Emergency Contacts:** - Create a list of important contact numbers, including local emergency services and embassy/consulate information.

#### **7. Use Travel Tools and Apps:**

- Utilize travel planning tools, apps, and websites to organize and store itinerary information, flight details, accommodation bookings, and maps.

#### **8. Share the Itinerary:**

- Share the itinerary with fellow travelers or family members for safety and coordination.

#### **9. Stay Informed and Flexible:**

- Stay updated on local events, weather forecasts, and any changes in travel plans.
- Be prepared to adjust the itinerary if needed.

#### **10. Enjoy the Journey:**

- While it's important to stick to the plan, also leave room for spontaneity and serendipitous discoveries during the trip.

#### **11. Document the Experience:**

- Keep a travel journal, take photos, and capture memories to relive the experience later.

Creating a well-thought-out travel itinerary can enhance the travel experience, making it more enjoyable and organized. It also helps ensure that travelers make the most of their time in a new destination.

### **Cultural Awareness in Tourism**

#### **ChatGPT**

Cultural awareness is a critical aspect of tourism, as it involves respecting and understanding the culture of the destination you are visiting. Being culturally aware not only enhances the travel experience but also promotes positive interactions with local communities and contributes to responsible and

sustainable tourism. Here are key points to consider regarding cultural awareness in tourism:

### **1. Research Before You Go:**

- Learn about the culture, customs, traditions, and social norms of the destination. Familiarize yourself with the local history, religion, and language.
- Understand any cultural sensitivities or taboos that should be respected during your visit.

### **2. Respect Local Customs:**

- Dress modestly and appropriately, especially when visiting religious or conservative areas.
- Follow local etiquette, such as removing your shoes before entering a home or temple.
- Be mindful of gestures and body language that may have different meanings in the local culture.

### **3. Learn Basic Phrases:**

- Make an effort to learn a few basic phrases in the local language, such as greetings and polite expressions. This can go a long way in showing respect for the local culture.

### **4. Engage with Locals:**

- Interact with local people and communities respectfully and with an open mind. Engaging in conversations can lead to valuable cultural insights.
- Participate in cultural activities or workshops offered by locals, such as cooking classes or traditional dance performances.

### **5. Observe and Adapt:**

- Pay attention to how locals behave and adapt your behavior accordingly. For example, if you notice that people lower their voices in certain settings, follow suit.
- Be patient and understanding if things don't go as planned. Cultural differences may lead to variations in service quality and communication styles.

## **6. Respect Sacred Sites and Symbols:**

- When visiting religious or sacred sites, follow dress codes and show proper reverence.
- Ask for permission before taking photographs, as some places may be considered sacred or private.

## **7. Support Local Businesses:**

- Opt for locally owned and operated businesses, such as restaurants, shops, and accommodations. This helps contribute to the local economy and preserves cultural authenticity.

## **8. Practice Responsible Tourism:**

- Minimize your environmental impact by following sustainable and eco-friendly practices.
- Avoid engaging in activities that harm the local culture or environment, such as buying products made from endangered species or participating in exploitative tours.

## **9. Leave No Trace:**

- Dispose of your trash properly and respect the local environment. Leave natural and cultural sites as you found them.
- Avoid touching or removing artifacts from historical or archaeological sites.

## **10. Be Mindful of Photography:**

- Ask for permission before taking photos of individuals, especially in remote or sensitive areas.
- Respect "no photography" signs or requests from locals.

## **11. Cultural Sensitivity in Communication:**

- Be aware of cultural differences in communication styles, humor, and personal space.
- Avoid sensitive topics such as politics or religion, unless you have a deep understanding of the local context and it's appropriate to discuss them.

Cultural awareness not only enriches your travel experience but also fosters positive interactions with locals and contributes to the preservation of cultural

heritage. It promotes responsible and sustainable tourism, ensuring that tourism benefits local communities while minimizing negative impacts.

## Sustainable Tourism

### ChatGPT

Sustainable tourism, also known as responsible or eco-tourism, is a concept and practice aimed at minimizing the negative impact of tourism on the environment, culture, and local communities while maximizing the benefits for all stakeholders involved. Sustainable tourism seeks to promote economic growth, protect natural and cultural resources, and enhance the overall travel experience. Here are key principles and strategies for sustainable tourism:

#### 1. Environmental Conservation:

- **Reducing Carbon Footprint:** Encourage sustainable transportation options, such as using public transport, carpooling, and promoting cycling and walking.
- **Waste Reduction:** Minimize waste generation, promote recycling, and use eco-friendly products and packaging.
- **Energy Efficiency:** Implement energy-efficient practices in accommodations, transportation, and attractions.
- **Biodiversity Protection:** Promote the conservation of local flora and fauna, including efforts to protect endangered species and their habitats.

#### 2. Cultural Respect and Preservation:

- **Cultural Sensitivity:** Encourage tourists to respect local customs, traditions, and social norms.
- **Cultural Exchange:** Support cultural exchange programs and activities that allow tourists to interact with local communities.
- **Preservation of Heritage:** Promote the conservation of historical sites, monuments, and artifacts while educating visitors about their significance.

#### 3. Economic Benefits for Local Communities:

- **Local Employment:** Create job opportunities for local residents, including guides, artisans, and hospitality staff.

- **Community Involvement:** Involve local communities in tourism planning and decision-making processes.
- **Fair Compensation:** Ensure that local artisans and service providers receive fair compensation for their products and services.

#### **4. Sustainable Accommodations:**

- **Eco-Friendly Lodging:** Promote eco-friendly practices in accommodations, such as using renewable energy, reducing water consumption, and implementing waste reduction measures.
- **Certifications:** Recognize and support accommodations with sustainability certifications, such as LEED (Leadership in Energy and Environmental Design) or Green Globe.

#### **5. Responsible Tour Operators:**

- **Tourism Operators:** Work with tour operators that follow responsible tourism practices, including respecting local communities and the environment.
- **Education:** Offer educational programs and training for tour operators and guides to raise awareness about sustainable tourism principles.

#### **6. Destination Management:**

- **Tourism Planning:** Develop and implement sustainable tourism plans and policies at the destination level.
- **Carrying Capacity:** Determine the maximum number of visitors a destination can sustainably accommodate without degrading its resources.

#### **7. Education and Awareness:**

- **Tourist Education:** Educate tourists about the principles of sustainable tourism and encourage responsible behavior.
- **Local Community Awareness:** Raise awareness among local communities about the benefits of sustainable tourism and their role in preserving their culture and environment.

#### **8. Monitoring and Evaluation:**

- **Performance Metrics:** Establish indicators and metrics to assess the impact of tourism on the environment, culture, and local economy.



- **Feedback Loop:** Continuously gather feedback from tourists, local communities, and stakeholders to make improvements.

## **9. Advocacy and Collaboration:**

- **Collaboration:** Foster collaboration among governments, tourism industry stakeholders, NGOs, and local communities to implement sustainable tourism practices.
- **Advocacy:** Advocate for policies and regulations that support sustainable tourism at the regional, national, and international levels.

Sustainable tourism is not only a responsible way to travel but also a way to ensure that future generations can enjoy the same destinations and cultural experiences. By following these principles and strategies, the tourism industry can contribute positively to local communities, protect natural and cultural resources, and promote economic growth in a sustainable manner.



ADUSUMILLI GOPALAKRISHNAIAH AND SUGARCANE GROWERS  
SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE,  
(AUTONOMOUS) VUYYURU A.P  
(Accredited at "A" level by NAAC, Bengaluru)



Department of History

VALUE ADDED COURSE: Travel & Tourism

CERTIFICATE

This is to Certify that .....*v. chandra Teja*..... of .....*1st* B.A..... has successfully completed value added Course in **Travel and Tourism** organised by the Department of History during the Year-2021-2022 and passed the Examination in grade...*A*.....

*T. Narasimha*  
Co-ordinator

*T. Narasimha*  
Head of Department  
Head, Department of History  
A.G & S.G. Siddhartha Degree College  
(Autonomous), VUYYURU - 521 165

*Chauhan*  
Principal  
PRINCIPAL  
A.G & S.G. Siddhartha Degree College of  
Arts & Science (Autonomous), Vuyyuru



ADUSUMILLI GOPALAKRISHNAIAH AND SUGARCANE GROWERS  
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Department of History

VALUE ADDED COURSE: Travel & Tourism

CERTIFICATE

This is to Certify that ....~~B. Prasanthi~~.....of .....<sup>1st</sup> B.A..... has successfully completed value added Course in **Travel and Tourism** organised by the Department of History during the Year-2021-2022 and passed the Examination in grade...A.....

*T. Natarajulu*  
Co-ordinator

*T. Natarajulu*  
Head of Department  
Head, Department of History  
A.G. & S.G. Siddhartha Degree College  
(Autonomous), VUYYURU - 521 165

*Chell*  
Principal  
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Arts and Science (Autonomous), Vuyyuru



**Adusumilli Gopalakrishnaiah & Sugarcane Growers  
Siddhartha Degree College of Arts and Science**

**Autonomous College**

**NAAC 'A' Grade College**

**Vuyyuru, Krishna (Dt), Andhra Pradesh-521165**

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**VALUE ADDED COURSE**

**TITLE: WATER ANALYSIS**

**VAC CODE: CHE-WA-01**

**On 1<sup>st</sup> AUG, 2022 TO 31<sup>th</sup> AUG 2022**

**Duration of the Course: 30Days**

**Organized By**

**Department of Chemistry**

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## **“WATER ANALYSIS”**

### **Objectives:**

- INTRODUCTION
- WATER QUALITY PARAMETERS
- BIO CHEMICAL OXYGEN DEMAND (BOD), CHEMICAL OXYGEN DEMAND (COD)& DISSOLVED OXYGEN
- HARDNESS CLASSIFICATION OF WATER
- PHYSICAL PARAMETERS
- CHEMICAL PARAMETERS
- ANALYSIS OF TURBIDIMETRY
- CATION MEASUREMENTS
- ANION MEASUREMENTS

### **Methodology :**

Teaching and Learning Methods

**Duration:** 30 Days

**A.G. & S.G. Siddhartha Degree College of Arts & Science**  
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**

---

**Title: "WATER ANALYSIS"**

**Date: 01/08/2022 TO 31/08/2022**

Date	Content	Module No
01/08/2022 TO 10/08/2022	Introduction	I
11/08/2022 TO 17/08/2022	Water quality parameters	II
18/08/2022 TO 24/08/2022	Physical Parameters & Chemical parameters	III
25/08/2022 TO 31/08/2022	Instrumentation	IV

A.G. & S.G. Siddhartha Degree College of Arts & Science  
Vuyyuru-521165, Krishna District, Andhra Pradesh

Value added Course

Title: "WATER ANALYSIS"

Student Enrolment Sheet

Class: I B.Sc (M C Cs)

S. No	Roll No.	Name of the Student	Signature
1	1953701	Abdul Kareem	Abdul Kareem
2	1953702	B.Durga Praveen	B.Durga Praveen
3	1953703	Abdul Rehana	Ab. Rehana
4	1953704	G.Surendra babu	G. Surendra babu
5	1953705	K.Veera Praveen	K. Veera praveen
6	1953706	M.N.Jagadeesh	M.N. Jagadeesh
7	1953707	P.Deepika	P. Deepika
8	1953708	V.Akhila	V. Akhila
9	1953709	K.Bala Souri	K. Bala Souri
10	1953710	S.srinivas	S. Srinivas
11	1953711	V.V.V.S.S.Naga babu	V.V.V. Ss. Naga Babu
12	1953712	O.Neeraja	O. Neeraja
13	1953713	P.Mahesh babu	P. Mahesh babu
14	1953714	P.Nithish	P. Nithish
15	1953715	Md.Noor bhasha	Md. Noor Basha

M. Saethi  
Signature of the Lecturer

K. Renuka  
Signature of the H.O.D

**Value Added Course**

**Title: “WATER ANALYSIS”**

**Test Exercise:**

1. Turbidity in water is due to-----
2. Activated carbon is used in water treatment for-----
3. The maximum permissible limit for fluoride in drinking water is-----
4. Mathew moglobinemia disease in infants is caused due to-----
5. Blue baby disease found in infants is due to excessive \_\_\_\_\_ in drinking water.
6. Which of the following method is used to forecast the population of old and very large city-----
7. A 25 ml sample was diluted to 250 ml with odorless distilled water so that the odor of the sample no longer perceivable. What was the Threshold odor number.-----
8. Which of the following is the latest Indian standard code provides specifications for drinking water?
9. Which one of the following is the most important parameter for the removal of discrete particles in the design of continuous flow rectangular sedimentation tank?
10. As per I.S.10500, the acceptable limit for chlorides in mg/l in drinking water is-----



**Value Added Course**

**Title: "WATER ANALYSIS"**

**Key:**

1. Colloidal particles
2. Removing odour
3. 1.5mg/ Litre
4. Nitrates
5. Nitrates
6. Arithmetical increase method
7. 10
8. IS 10500 : 2012
9. Surface overflow rate
10. 250 mg/l

A.G. & S.G. Siddhartha Degree College of Arts & Science  
Vuyyuru-521165, Krishna District, Andhra Pradesh

Department of Chemistry

Value added Course

Title: "WATER ANALYSIS"

Marks List

Class:II B.Sc (MPC TM)

S. No	Roll No.	Name of the Student	Marks
1	1953701	Abdul Kareem	10
2	1953702	B.Durga Praveen	10
3	1953703	Abdul Rehana	10
4	1953704	G.Surendra babu	9
5	1953705	K.Veera Praveen	9
6	1953706	M.N.Jagadeesh	10
7	1953707	P.Deepika	10
8	1953708	V.Akhila	10
9	1953709	K.Bala Souri	9
10	1953710	S.srinivas	8
11	1953711	V.V.V.S.S.Naga babu	10
12	1953712	O.Neeraja	10
13	1953713	P.Mahesh babu	9
14	1953714	P.Nithish	10
15	1953715	Md.Noor bhasha	8

  
Signature of the Lecturer

  
Signature of the H.O.D

A.G. & S.G. Siddhartha Degree College of Arts & Science  
Vuyyuru-521165, Krishna District, Andhra Pradesh

Department of Chemistry

Value added Course

Title: "WATER ANALYSIS"

Feed Back Form

Name of the Student: P. Nithish

Class and Roll Number: MCS 1<sup>st</sup> year 19-714

1. Is the programme interested to you (Yes/No)
2. Have you attended all the session (Yes/No)
3. Is the content of the program is adequate (Yes/No)
4. Have the teacher covered the entire syllabus? (Yes/No)
5. Is the number of hours adequate? (Yes/No)
6. Do you have any suggestions for enhancing or reducing the number of weeks designed for the program? (Yes/No)
7. On the whole, is the program useful in terms of enriching your knowledge? (Yes/No)
8. Do you have any suggestions on the program? (Yes/No)

A.G. & S.G. Siddhartha Degree College of Arts & Science  
Vuyyuru-521165, Krishna District, Andhra Pradesh

Department of Chemistry

M.d Noor Basha

Value added Course

18+ M.CC6 19-7-15

Title: "WATER ANALYSIS"

Feed Back Form

Name of the Student:

Class and Roll Number:

1. Is the programme interested to you (Yes/No)
2. Have you attended all the session (Yes/No)
3. Is the content of the program is adequate (Yes/No)
4. Have the teacher covered the entire syllabus? (Yes/No)
5. Is the number of hours adequate? (Yes/No)
6. Do you have any suggestions for enhancing or reducing the number of weeks designed for the program? (Yes/No)
7. On the whole, is the program useful in terms of enriching your knowledge? (Yes/No)
8. Do you have any suggestions on the program? (Yes/No)

**A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**

**- Attendance Register**

Class/Section: **MCCS**

Year: : **2021-22** Department of: **Chemistry**

Paper:

Lecturer: **M.Sanathi**

Sl.No	Roll No	Student Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
1	1953701	Abdul kareem	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	
2	1953702	B. Durga Praveen	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	
3	1953703	Abdul Raheena	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
4	1953704	G. Surendra babu	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	
5	1953705	K. Veera Praveen	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
6	1953706	M.N. Jagadeesh	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
7	1953707	P. Deepika	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	
8	1953708	V. Akhila	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
9	1953709	k. Bala Souri	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	
10	1953710	S. Srinivas	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
11	1953711	V. V. V. S. S. Naga babu	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
12	1953712	O. Neeraja	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
13	1953713	P. Mahesh babu	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	
14	1953714	P. Nitish	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	
15	1953715	Md. Noor Basha	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	

*M. Sanathi*  
Signature of the Lecturer

*K. Ramani*  
Signature of the HOD

**A.G. & S.G. Siddhartha Degree College of Arts & Science**

Vuyyuru-521165, Krishna District, Andhra Pradesh

**Value Added Course**

**- Attendance Register**

Class / Section: **MCCS**

Year : **2021-22**

Department of: **Chemistry**

Paper:

Lecturer: **M.Santhi**

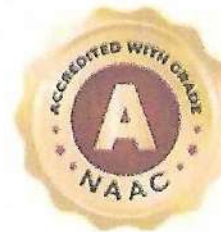
Sl.No	Roll No	Student Name	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
1	1953701	Abdul Kareem	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	
2	1953702	B. Durga Praveen	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	
3	1953703	Abdul Raheena	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	
4	1953704	G. Surendrababu	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	
5	1953705	K. Veera Praveen	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	
6	1953706	M. N. Jagadeesh	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
7	1953707	P. Deepika	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
8	1953708	V. Akhila	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
9	1953709	K. Bala Souri	P	P	P	P	A	P	P	P	P	P	P	A	P	P	P	
10	1953710	S. Srinivas	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
11	1953711	V.V.V.S.S. Naga Babu	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	
12	1953712	O. Neeraja	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	
13	1953713	P. Mahesh babu	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	
14	1953714	P. Nithish	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
15	1953715	M.d. Noor Basha.	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	

*M. Santhi*  
Signature of the Lecturer

*R. Keerthi*  
Signature of the HOD



ADUSUMILLI GOPALAKRISHNAIAH AND SUGARCANE GROWERS  
SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE,  
(AUTONOMOUS) VUYYURU A.P  
(Accredited at "A" level by NAAC, Bengaluru)



## Department of Chemistry

VALUE ADDED COURSE: **Water Analysis**

### CERTIFICATE

This is to Certify that . *B. Durgapaveen* Son/Daughter of Shri/Smt *B. Bhaskara Rao*

has Successfully completed value added course in **Water Analysis** Conducted by the Department of Chemistry  
from 01-08-2022 to 31-08-2022 We wish him her bright future

*M. Sautter*  
Co-ordinator

*K. Renuka*  
Head of Department

*Chauhan*  
Principal  
AG & SG Siddhartha Degree College of  
Arts & Science (Autonomous), Vuyyuru



ADUSUMILLI GOPALAKRISHNAIAH AND SUGARCANE GROWERS  
SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE,  
(AUTONOMOUS) VUYYURU A.P  
(Accredited at "A" level by NAAC, Bengaluru)



## Department of Chemistry

VALUE ADDED COURSE: Water Analysis

### CERTIFICATE

This is to Certify that . Ad. Reehana Son/Daughter of Shri/Smt Ad. Subhana

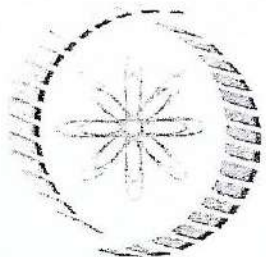
has Successfully completed value added course in **Water Analysis** Conducted by the Department of Chemistry  
from 01-08-2022 to 31-08-2022 We wish him her bright future

M. Sautter  
Co-ordinator

K. Reenu  
Head of Department

Principal  
AG & SG Siddhartha Degree College of  
Arts & Science (Autonomous), Vuyyuru





# NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

**NAFEESUNNISA**

for successfully completing the course

## Analytical Chemistry

with a consolidated score of **51** %

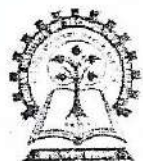
Online Assignments	19.03/25	Proctored Exam	31.5/75
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Total number of candidates certified in this course: **384**

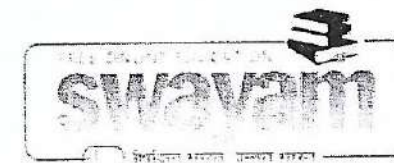
Jul-Oct 2022

(12 week course)

Prof. Debjani Chakraborty  
Coordinator, NPTEL  
IIT Kharagpur



Indian Institute of Technology Kharagpur

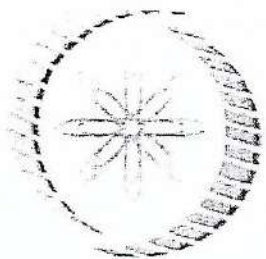


Roll No: NPTEL22CY61SS4162162

To validate the certificate



No. of credits recommended: 3 or 4



# NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

**B KRUPA**

for successfully completing the course

## Analytical Chemistry

with a consolidated score of **51** %

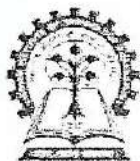
Online Assignments	16.13/25	Proctored Exam	34.5/75
--------------------	----------	----------------	---------

Total number of candidates certified in this course: **384**

Jul-Oct 2022

(12 week course)

Prof. Debjani Chakraborty  
Coordinator, NPTEL  
IIT Kharagpur



Indian Institute of Technology Kharagpur





# NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

**NARRA THARUNI**

for successfully completing the course

## Analytical Chemistry

with a consolidated score of **44** %

Online Assignments	13.72/25	Proctored Exam	30/75
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Total number of candidates certified in this course: **384**

Jul-Oct 2022

(12 week course)

Prof. Debjani Chakraborty  
Coordinator, NPTEL  
IIT Kharagpur



Indian Institute of Technology Kharagpur

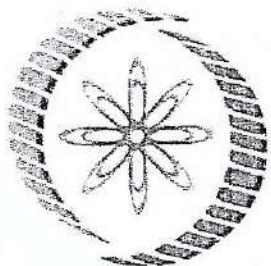


Roll No: NPTEL22CY61S5499/753

To validate the certificate



No. of credits recommended: 3 or 4



# NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

**M RADHIKA**

for successfully completing the course

## Analytical Chemistry

with a consolidated score of **46** %

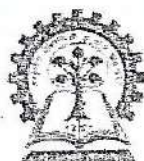
Online Assignments	16.44/25	Proctored Exam	30/75
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Total number of candidates certified in this course: **384**

Jul-Oct 2022

(12 week course)

**Prof. Debjani Chakraborty**  
Coordinator, NPTEL  
IIT Kharagpur



Indian Institute of Technology Kharagpur

