

#### JAI SRI GURUDEV

## SRI ADICHUNCHANAGIRI FIRST GRADE COLLEGE CHANNARAYAPATNA-573116

#### DEPARTMENT OF CHEMISTRY and ZOOLOGY

To.

The Principal
Sri Adichunchanagiri First Grade College
Channarayapatana – 573116

#### From,

Head of the Department of Chemistry and Zoology Sri Adichunchanagiri First Grade College Channarayapatana – 573116

Respected Sir,

## Sub: Requisition for introducing Add-on Course

With respect to the above cited subject, the Department of Chemistry and Zoology decided to offer an Add-on course on Organic Farming in this semester for the academic year 2022-23. We have enclosed the syllabus copy of the add-on course along with this requisition for your kind approval.

Thanking you,

Yours faithfully

Date: 03/11/20222

Principal
Sri Adichunchanagiri First Grade Collage
Channarayapatna-573116

HOD of Chemistry SAFG College Channarayapatna-573116 Hassan Dist h.O.D. of Zoology S. A. F. G. College Channarayapatna-573116

## SRI ADICHUNCHANAGIRI FIRST GRADE COLLEGE

CHANNARAYAPATNA-573116

DEPARTMENT OF CHEMISTRY and ZOOLOGY



# Organic Farming - Bio-fertilizers

## Course Details:

- Introduction on organic farming
- · Basics of Biofertilizers
- Culture of Bacterial and fungal Biofertilizers

**Duration of Course: 30 Hours** 

Days : 3 days per week

Timings: 9.00 AM to 10.00 AM

students of Students OF

Hurry up Limited Seats

For registration/ enquiry please contact us at: 8095380939/ 9606201568

**Registration: 15-11-2022** 

Last date of

## SRI ADICHUNCHANAGIRI FIRST GRADE COLLEGE CHANNARAYAPATNA-573116

#### **DEPARTMENT OF CHEMISTRY and ZOOLOGY**

#### **CIRCULAR**

It is hereby notified to all the interested students to opt for an Add-on course on "Organic Farming – Biofertilizers" offered by the Department of Chemistry and Zoology in this semester for the academic year 2022-23. Interested candidates must register their name with Dr. M.Nirupama, Head of the Department of Zoology on or before 15th November 2022.

**Note:** First 50 members will be considered for the course. Certificate will be provided after completion of the course.

HOD of Chemistry SAFG College

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Principal
Sti Adichunchanagiii First Grade Collage

Channarayapatna-573 116

Jai Sxi Guradev Sui Adichemchanagiri first Grade College Pathani. Department of Chemistry and Zoology Ferrers Minutes of Meeting: On 05/11/2022. the first meeting on Consideration of III Semester reopening the college Dr. Chandrasherear B.N. Assistant professor in Chemistry, and Do. Nivupama M. Assistant professor in Loology, and Radhamma Kim Assistant professor in Zoology preceeded the discussion Add on course related to Semester academics 2022. idgenola: of planning - Add on course. od. Syllabus - Add on Course 03. Time table - Add on Course of Selected to students 05. Add on course organic farming Bio-fertilizers proceedings: - . It was decided by chemistry & Toology department faculties to prepare planning Add on Course for III Servester Studente. · Faculties discussed the Add on course Tittle of Organic farming Bio-fertilizers. Faculties discussed the Syllabus, Timetable, and Selected to Students for III Semester. Staff members in Meeting. 1. Dr. Chandrashelcar 13.N 2. Dr. Nirupama M. 3. Smt Radhamma km.

Jai Sai Gurader Sai Adichunchanagiri first Grade Channarayapatna 573116 Department of Chemistry and Zol On 12/11/2022 Second meeting of TII od Semester 2023, was held Dr. Chandrasherar B.N. Hopg Chemistry Dr. Nivupama M. H.OD of Zoology and Radhamma Km Lecturer in Loology proceeded with the meeting. The meeting was commensed by welcome Speech by Dr. Chandrasheron B.N and vote of thanks by Dr. Nivupama M. 2022 - 2023 organic Farming - Bio - fertilizers
Da Final Syllabus & Time Table 03. Monday wednesday of Friday (9-10) Time proceedings: \* It was discussed and decided to selected students in Registered on Add on source organic farming Bio-fertilizers in III rd Semester pm & CZ students \* It was decided in the meeting to prepare the Final Syllabus & Time table on class Engaged to monday, wednesday & Friday (9-10). Name 1. Dr. Chandrashekar B.N Munip 2. Dr. Nirapama.M. 3. Smt. Radhamma K.m

"Jai Sri Gurudou" Sui Adichunchanagiri first Grade College RA Channarayapatna 573116 Department of Chemistry and Zoology 145 On 08.12.2023 Third meeting of III Semester 2023 was held Dr. Chandrasheras B.N H.O.D of Chemistry Dr. Nivupama M. HoD of Zoology and Smit Radhamma km. Dept of Loology proceeded with the meeting The meeting was Commenced by welcome. Speech by Dr. Chandrashekar B.N. and vote of Thanks by Dr. Mirupama M. H. O.D of Loology Agenda: -1. Assignment of Internal Assessment. 2. To conduct Students Internal Test (IA) 3. Syllabus planned to completeon theory. Proceedings: It was decided in the meeting to conduct the Assignment III Sem students \* It was decided to conduct Test for III Semester Students. x Department decided to device the Syllabus is planned Completion of theory Syllabus. The meeting procedings Commenced with welcome address by Dr. Chandrasherar B.N. and Concluded with the vote of thanks Dr. Nirupama. M. HOD of Zoology. Thanking you 1. Dr. chandrashekar B.N 2 Dr. Nirupama M 3 Smt Radhamma K.m Majorathank

Jai Sai Guruder

SviAdichunchanagiri First Grade Collegagiri F

Channarayapatna 573116 54 No. 1 Department of Chemistry and Losto.
"Meeting proceeding" On 20/01/2023 fourth meeting of III od Semester 2022-2023 was held Dr. Chandrasherar BN H.O.D of Chemistry Dr. Nirupama M. H.O.D of Loology & Radhamma Km Lecturer in Loology preceded with the meeting. The meeting was commenced by welcome speech by Dr. Nirupama. M. and vote of Thanks by Dr. Chandrashekar B.N. H.O.D of chemistry. Agenda: -Date of Examination on Add on Course 2022-2023 organic farming Bio-textilizers. \* Question paper Setting. \* Certificate Distribution III sem Students proceedings: -It was discussed and decided to Date of Examination on Add on course 2022-2023 It was decided to paper setting I or 2 sets It was decided to meeting Distribution to Ind Semester students Certificate on Add on Course organic farming Bio-fertilizers on Semester Thanking you. 1. Dr. Chandrashekar B.N a Dr Nirupama M the person. 3 Radhamma Kim



## SRI ADICHUNCHANAGIRI FIRST GRADE COLLEGE

CHANNARAYAPATNA-573116

## DEPARTMENT OF CHEMISTRY and ZOOLOGY

## **SYLLABUS**

Add on course: Organic Farming – Bio-fertilizers

Objective of the course: The course was designed to provide an opportunity to students to study the importance of organic farming using bio fertilizers. The course was aimed to help students to develop the transferable skills necessary for careers in research, teaching, entrepreneurship, professions allied to agriculture and other relevant field.

#### **Learning Outcomes:**

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

- 1. Realize the significance of eco-friendly fertilizers.
- 2. Demonstrate hands on experience on culture and bulk production of biofertilizers.
- 3. Acquire knowledge on application of the bio-fertilizers for different crops.
- 4. Study the importance of bio-fertilizers in organic farming.
- 5. Advantages of organic fertilizers over inorganic fertilizers.

Mode of Teaching

: Regular mode

**Total Duration of the Course** 

: 30 hrs.

Fee: Free

**Co-ordinators:** 

1) Dr. Nirupama.M, Department of Zoology

2) Dr.B.N.Chandrashekar, Department of Chemistry

**Total Hours: 30** 

#### Unit 1: Introduction:

06 Hrs.

Introduction, History of Organic Farming, principle, objective and types of organic farming, Organic Fertilizers and Inorganic fertilizers, Disadvantages of inorganic fertilizers, advantages of organic farming, methods and applications of organic farming, Micro nutrients and their application.

#### Unit - 1: Basics of Biofertilizers

12 Hrs.

Biofertilizers –definition, importance and advantages. 2. Sources of Biofertilizers -Bacteria, Cyanobacteria, Mycorrhiza and PSM. 3. Outlines of production technology of biofertilizers-

isolation, selection of strain, preparation of mother culture, starter culture, mass culturing 4. Rhizobium –Mass multiplication, starter culture, mass cultivation, inoculant formulations and application method.

### Unit - 2: Culture of Bacterial and fungal Biofertilizers

12 Hrs.

- 1. Azatobacter- Mass multiplication, maintenance of culture, application and crop response.
- 2. Azospirillum Mass multiplication, inoculant formulations, associative effect and crop response. 3. Anabaena- Characteristics, Azolla-Anabaenaassociation,; Azolla production and application. 4. VAM- mass production substrate, substrate free, in-vitro methods and crop response.

#### **Books for Reference:**

- 1. Kannaiyan, S., 2003. Bioetchnology of Biofertilizers, CHIPS, Texas.
- 2. Mahendra K. Rai, 2005. Hand book of Microbial biofertilizers, The Haworth Press, Inc. New York.
- 3. Reddy, S.M. et. al., 2002. Bioinoculants for sustainable agriculture and forestry, Scientific Publishers, Jodhpur.
- 4. Subba Rao N.S., 1995 Soil microorganisms and plant growth Oxford and IBH publishing co. Pvt. Ltd. New Delhi.

#### Scheme and evaluation

## Assessment is by coursework, which integrates the following:

- Group Discussion
- Reading various texts
- Individual PowerPoint Presentation
- Conversation practices
- Field work / Experiential Learning
- Problem solving skill

Participation in classroom activities, progress and motivation will account for the overall assessment. A final exam will comprise of written exam and as follows.

Components	Marks
Attendance	10
Assignment	20
Seminar and Viva	20
Written examination	50
Total	100

Minimum attendance required is 75 % attendance.



## Grading System:

Percentage of marks	Grade
95 and above	A++
85 and above	A+
70 and above	A
50 and above	В
35 and above	С

HOD of Chemistry SAFG College Channarayapatna-573116 Hassan Dist

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CHANNARAYAPATNA-573116

## DEPARTMENT OF CHEMISTRY and ZOOLOGY

## Circular

Date: 04-11-2022

The following faculty members are informed to take classes for Add on courses for the academic year 2022-23 as per the time table attached along with circular and they are instructed to submit the attendance and necessary reports at the end of Semester/ academic year 2022-23.

Sl. No	Faculty Name	Signature
1	Dr.B.N.Chandrashekar	
2	Dr.M.Nirupama	Quit
3	Mrs.Radhamma.K.M	100

Co-ordinators

hannarayapatna-57311

HOD of Chemistry SAFG College

Channarayapatna-573116

Hassan Dist

Principal
Sri Adichunchanagiri First Grade Collage
Channarayapatna-573116



## SRI ADICHUNCHANAGIRI FIRST GRADE COLLEGE

CHANNARAYAPATNA-573116

# DEPARTMENT OF CHEMISTRY and ZOOLOGY Academic Year 2022-23

Day/Time	9 to 10 AM		College Time table	
Monday	BNC		-	
Tuesday		-	-	-
Wednesday	MN	-		
Thursday		-	-	-
Friday	KMR			
Saturday		-	-	-

**Note:** The Time Table is prepared as per direction of Time Table and Examination Committee coordinator.

Co-ordinators

Time table Coordinator

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SAFG College Channarayapatna-573116
Channarayapatna-573116 Hassan Dist

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## SRI ADICHUNCHANAGIRI FIRST GRADE COLLEGE

CHANNARAYAPATNA-573116

## **DEPARTMENT OF CHEMISTRY and ZOOLOGY**

## List of Registered Students in Add on Course 2022-23

## Organic Farming - Bio-fertilizers

SI.NO	Student Name	University Roll Number	Combination	Mobile Number	Email	Signature
1	ABHILASHA C M	UOIGF2150018	CZ	7890363614	obliabhilatha cma. gmail	Abhilasha.cm
2	AISHWARYA KY	COC F2150007	PC		ausheranyo KYS6@gmail	
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**Co-ordinators** 

HOD of Chernistry SAFG College Channarayapatna-573116 Hassan Dist

H.O.D. of Zoology S. A. F. G. College Channaravapatna-573116

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Sri Adichunchanagiri First Grade Collage
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Add on Course: - organic farming 33" Fir. Bio-fertilizers REGISTER OF ATTENDANCE & FEES FOR THE MONTH OF November 15 1 100 22 Name of the busines SxiAdichunchanogist first Grade College Section III Semester procests Place Champaragapatra Theory 1 2 3 4 5 6 7 8 9 10 11 12 Date of payment Admi NAMES 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 KSIDA No. ij 1 1 4 1 1 1 1 1 1 1 1 Santay BM 31 11111111 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 Saraswathi CN 32 Shambhavi YS 1 A a 33. Shree vassha CS 34 1 1 1 1 1 1 1 1 A I 1 1 1 1 1 1 1 Shubha Sh 35 1 4 1 4 1 4 1 1 1 1 4 1 1 1 1 1 A 1 A 1 1 1 1 1 A 1 A Shwetha Bs 36 1 1 1 1 1 1 1 1 1 Sindhushree S 1 4 4 1 1 1 1 1 1 1 1 1 6 1 1 1 111111111 37 Sona BN 1 1 1 1 1 1 1 1 1 A 1 1 1 1 1 1 1 1 38 1 1 1 1 1 1 1 1 1 1 Spandana K.K. 39 LIIIIIIAAAI Spootthi C.K 1 1 A 1 1 1 1 1 1 1 1 A 1 A 1 1 1 1 40 1 1 8 1 1 1 1 1 1 1 1 Suchithra K.R. 1111111111111 41 1 11 1 1 1 1 1 1 1 1 1 Suhas SL 4 0 1 1 1 1 1 1 1 1 A 1 Suma M.S 43 111111111111 Sunitha KM 1 1 1 1 1 1 1 1 A 1 1 1 1 1 1 1 44 1 1 A 1 1 A 1 1 1 1 1 1 Sushmitha K.R. 45 A 1 1 1 1 1 1 A 1 1 Swathi MM\_ 46 111111111111111 Tejaswini K.R. 47 AIAAIAIIA yogitha R. Number present M Daily E Instial M 2286032032 an roll at the beginning of month 26/01/23

# SRI ADICHUNCHANAGIRI FIRST GRADE COLLECTION Channarayapatna-573116

## DEPARTMENT OF CHEMISTRY & ZOOLOGY Add on course Examination- Feb/March 2022-23 Organic Farming — Bio-fertilizers

Time: 2 Hours Max marks: 50

#### I. Answer any FIVE of the following:-

5X2=10 Marks

- 1. Mention the objectives of organic farming.
- 2. What are micro nutrients?
- 3. Define Biofertilizers.
- 4. Mention any two nitrogen fixing bacterias.
- 5. What is the role of VAM?

## II. Answer any FOUR following questions.

4x5 = 20 M

- 1. Discuss the advantages and disadvantages of Inorganic fertilizers.
- 2. Explain briefly the sources of biofertilizers.
- 3. Write a brief note on production technology of biofertilizers.
- 4. What are the characteristics properties of anabaena.
- 5. Write a note on azolla production and mention its applications.

## III. Answer any TWO of the following questions.

2x 10 = 20 M

- 1. What are the inoculant formulations and application method of Rhizobium?
- 2. Explain the culture process for mass multiplication of azatobacteria and azospirillum.
- 3. Discuss the application and crop response of azatobacter.

H.O.D. of Zoology S. A. F. G. College Channarayapatna-573116

HOD of Chemistry

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Principal
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#### || Jai Sri Gurudev ||

Sri Adichunchanagiri Shikshana Trust (R.)

## Sri Adichunchanagiri First Grade College Channarayapatna – 573116, Hassan Dist.,

(Affiliated to University of Mysore)

(Re-Accredited with 'B+' Grade by NAAC)

## CERTIFICATE OF COMPLETION

Issue Date: 16th Feb 2023

Course Coordinator

IQAC Co-ordinator

Principal