



S.A.S. GOVERNMENT DEGREE COLLEGE
NARAYANAPURAM, WEST GODAVARI DISTRICT-534411
(AFFILIATED TO ADIKAVI NANNAYA UNIVERSITY, RAJAMAHENDRAVARAM)
Phone: 08818 252189, E-mail: narayanapuram,jkc@gmail.com



DEPARTMENT OF ZOOLOGY

CAREER ORIENTED PROGRAM

CERTIFICATE COURSE IN

VERMICULTURE



Academic Year: 2018-19



1.Course Name : VERMI CULTURE

2.Duration : 30 Hours :

3.Level : UG

4.Course Type : Scheduled

3.No.of Students Joined : 16

4.Date : 23.07.2018 to 21.08.2018

5.Time : 4.00 TO 5.00

6.Venue : ZOOLOGY LAB

Certification : Certificate will given on the continuous comprehensive of students performance in the learning activity

SUBJECT RELATED CERTIFICATE COURSE- 2018-2019



The faculty members of the Zoology Department in the principal chamber to discuss and review the conduct of the certificate course titled "VERMI CULTURE" under the chairman ship of the principal and the faculty of the department of Zoology on 22.07.2018


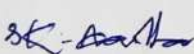
AGENDA:


Starting of certificate course for II B.SC (CBZ) students

RESOLUTIONS:

- ❖ It is resolved to start the certificate course titled "Department of VERMI COMPOST" from 23.07.2018 to 21.08.2018 (30 days) for the academic year 2018-2019.
- ❖ It is also resolved to frame the syllabus, regulations for the successful completion of the certificate course. Titled "VERMI COMPOST".
- ❖ Enrolled 16 students in this Certificate course.
- ❖ Resolved to conduct classes at 4.00 PM.
- ❖ Resolved to conduct exam after completion of the course and issue certificates to qualified candidates.
- ❖ Qualifying marks 40 %.

MEMBERS PRESENT :

- 1 
- 2 


Incharge
Signature
Department of Zoology
SRI SAKTHI COLLEGE
HIGHER EDUCATION
MADURAI-625 006

PERMISSION LETTER FOR CERTIFICATE COURSE

NARAYANAPURAM

Dt. 02.07.2018

From
The In-charge,
Department of Zoology,
SAS GDC,
Narayanapuram.
To
The Principal,
SAS GDC,
Narayanapuram.

Sir,


Sub: Department of Zoology ,SAS Govt. Degree College, Narayanapuram- Conduct of Certificate course in Vermi Culture (30 hours) -Accordance of permission -Req.-Reg.

Ref: Minutes of the departmental meeting dated

Adverting to the subject, I wish to submit to your kindself that the Department of Zoology is planning to conduct a Certificate course in Vermi Culture with 45 hours duration for the students of our college as well as the general public . A resolution was passed to this effect in the Departmental meeting dated 02.07.2018 .Hence I request you to kindly accord permission to conduct the same from onwards after due consultation and approval by the staff council.

Thanking you sir.

Yours faithfully


Incharge
Department of Zoology
SAS GOVERNMENT DEGREE COLLEGE
NARAYANAPURAM-534 406

Enclosures

1. A xerox copy of the minutes of Departmental meeting dt.
2. A copy of syllabus
3. Blue print of the Execution of the course

PROCEEDINGS OF THE PRINCIPAL, SAS GOVT. DEGREE COLLEGE, NARAYANAPURAM.

PRESENT: Y.RADHA KRISHNA , M.COM

RC NO. A/2018-19-1

DATE: 02.07.2018

FROM

TO

The Principal,
SAS GDC,
Narayanapuram

The In-charge,
Department of Zoology,
SAS GDC,
Narayanapuram.

Sir/Madam,


Sub: SAS Govt. Degree college, Narayanapuram- Conduct of certificate course in Vermiculture – Permission accorded- Reg.

Adverting to the subject, I here by draw the kind attention of the in-charge of department of Zoology of this college, that a decision was taken in the staff council meeting dated 02.07.2018 after much discussions and deliberation to approve and accord permission for the conduct of a certificate course in Vermiculture with 30 hours duration for the general public as well as the students of our college from dt.23.07.2018.

You are further instructed to make all the necessary preparations and arrangements for the commencement of the course on dt.23.07.2018.

Enclosures

1. A copy of the resolution of the staff council


**PRINCIPAL
PRINCIPAL
SAS GOVT. DEGREE COLLEGE
NARAYANAPURAM
West Godavari District.
Pin: 534 406, Andhra Pradesh**



NOTICE

NARAYANAPURAM

Dt.22.07.2018

All the students of SAS Govt. Degree college, Narayanapuram are hereby informed that the Department of Zoology is intending to conduct a certificate course in Vermi Culture from 23.07.2018 onwards. The required permission from the honourable Principal of the college has been obtained. Hence the students who are interested in enrolling themselves for the course may please contact the in-charge of the department for further details on or before dt.22.07.2018.

Initials of the Principal

PRINCIPAL
SAS GOVT. DEGREE COLLEGE
NARAYANAPURAM
West Godavari District.
Pin: 534 406, Andhra Pradesh

In-charge of the dept.

Department of Zoology
SAS GOVT. DEGREE COLLEGE
NARAYANAPURAM - 534 406

SAS GOVERNMENT DEGREE COLLEGE, NARAYANAPURAM
Eluru District, Andhra Pradesh-534406
DEPARTMENT OF ZOOLOGY

Enrolled students list

S.NO	Regd No	CLASS	NAMAE OF THE STUDENT
1	173557110014	II B.SC (CBZ)	A.SITA DEVI
2	173557110017	II B.SC (CBZ)	B.TEJA SRI
3	173557110018	II B.SC (CBZ)	B.LAVANYA
4	173557110019	II B.SC (CBZ)	B.PRAKASH
5	173557110020	II B.SC (CBZ)	B.RAJU
6	173557110021	II B.SC (CBZ)	B.PHILIP
7	173557110022	II B.SC (CBZ)	D.ANUSHA
8	173557110023	II B.SC (CBZ)	D.LAKSHMI DURGA
9	173557110025	II B.SC (CBZ)	G.LAKSHMI NARAYANA
10	173557110026	II B.SC (CBZ)	G.SIVA NAGA MANI
11	173557110029	II B.SC (CBZ)	K.RAKESH
12	173557110030	II B.SC (CBZ)	K.SYAM BABU
13	173557110031	II B.SC (CBZ)	K.LATHA
14	173557110034	II B.SC (CBZ)	P.HEMA LATHA
15	173557110036	II B.SC (CBZ)	V.LIKITHA
16	173557110037	II B.SC (CBZ)	Y.L.S.S.HARSHA

Dept of HOD

Department of Zoology
SAS GOVERNMENT DEGREE COLLEGE
NARAYANAPURAM-534 406

PRINCIPAL
SAS GOVT. DEGREE COLLEGE
NARAYANAPURAM
West Godavari District.
Pin: 534 406, Andhra Pradesh



Course Objectives:

The main objective of the courses is to explore the possibilities with sustainable agriculture practices and various concepts from how to turn all kinds of waste garbage to valuable compost to impart the knowledge of converting the weeds into food of earthworms and preparing vermicompost and more. This course included the several topics on the general characteristics and cultural requirements of worms, substrates, advantages and economics of Vermicomposting, and quality analysis of some vermicompost formulations.

Syllabus (Theory)

Unit- 1

- 1.1 Introduction to vermiculture and vermicompost.
- 1.2 Systematic position, Habit and Habitat of Earthworm.
- 1.3 External features, shape & size, colouration & distribution of earth worms.
- 1.4 Body segmentation.
- 1.5 Species of earthworm used in vermiculture.
- 1.6 Economic Importance (roles +ve and -ve)

Unit -2

- 2.1 Food and feeding habitats of the earth worms.
- 2.2 Digestive system of earthworm.
- 2.3 Reproduction in Earthworm
- 2.4 Respiration in Earthworm.

Unit- 3

- 3.1 Earthworm for animal feeds.



- 3.2 Casting of earthworm as a biofertilizer.
- 3.3 Requirements for vermiculture.
- 3.4 Vermicomposting materials used in sericulture (organic waste)
- 3.5 Cattle dung plant product.

Unit – 4

- 4.1 Preliminary treatment of composting a material.
- 4.2 Vermicomposting material storage.
- 4.3 Preparation of vermiculture bed.
- 4.4 Maintenance of vermiculture bed.
- 4.5 Natural enemies and their control.

Unit- 5 4

- 5.1 Composition of vermicompost and worms.
- 5.2 Harvesting vermicompost and worms.
- 5.3 Marketing of vermicompost and worms.
- 5.4 Marketing of seed worms.
- 5.5 Role of vermicompost as fertilizers in agriculture.

Pattern of marks distribution for Theory Exam

Time-03 Hrs.

Marks-100

- Q-1.....20 Marks
- Q-2.....20 Marks
- Q-3.....20 Marks
- Q -4.....20 Marks
- Q-5.....20 Marks



Syllabus (Practical)

Part – A

Aim: Identification, classification and comment on

- 1) To study the external characters of earthworms.
- 2) Study of different species of earthworms. 5
- 3) Study of different vermiculture material.
- 4) Histological study of - A) Gizzard B) Testis C) Ovary D) Spermatheca E) Septal nephridia 5) Cattle dung 6) Plant product 7) Agricultural water

Part- B

Aim: To study the different systems of earthworm

- 1) To dissect out Alimentary canal of earth worm.
- 2) Dissection of reproductive system of earth worm.
- 3) Dissection of nerve ring of the earthworm.
- 4) Dissection and isolation of a) Septal nephridia. b) Spermatheca. c) Setae.

Part- C

Aim: Permanent micropreparation of

- 1) Spermathecae.
- 2) Septal nephridia.
- 3) Setae.
- 4) Testis.
- 5) Ovary.



Marks distribution for practical exam

Time-3 hrs

50 Marks

Q-1 Spotting (1to05)	15Marks
Q-2 Dissection.....	15 Marks
Q-3 Permanent micropreparation.....	08 Marks
Q-4 Class Record.....	06 Marks
Q-5 Viva-voice.....	06

Equirements for Vermiculture –

- 1) Container
- 2) Vegetable west
- 3) pH meter, cattle dung, Cow, buffalo, Sheep, Horse, Goat & poultry dropping
- 4) Agriculture waste-Stem, leaves & refuge of crops
- 5) Stem & leaves of weeds
- 6) Orchard leaf litter, sugarcane trash
- 7) Plant product-saw dust & pulp, various types of leaf litre, grasses life litter from avenue or residential areas.
- 8) Machinery- • Thresher • Mechanical choppers • Mixer for mixing waste organic material.
• Hand bore, digger etc. • Mechanical sieve • Weighing machine. • Sealing, packing machine etc.

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(Affiliated to Adikavi Nannaya University, Rajamahendravaram, A.P.)

Department of Zoology, 2018-2019

Certificate course on Vermi Culture - Student Attendance Register

S. NO	Regd No	Name of the Student	Attendance Days														
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	173557110014	A.SITA DEVI	p	p	P	p	p	P	p	p	p	p	p	p	p	p	p
2	173557110017	B.JAYA SRI	p	p	P	p	p	P	p	p	p	p	p	p	p	p	p
3	173557110018	B.LAVANYA	p	p	P	p	p	P	p	p	p	p	p	p	p	p	p
4	173557110019	B.PRAKASH	p	p	P	p	p	P	p	p	p	p	p	p	p	p	p
5	173557110020	B.RAJU	p	p	P	p	p	P	p	p	p	p	p	p	p	p	p
6	173557110021	B.PHILIP	p	p	P	p	p	P	p	p	p	p	p	p	p	p	p
7	173557110022	D.ANUSHA	p	p	P	p	p	P	p	p	p	p	p	p	p	p	p
8	173557110023	D.LAKSHMI DURGA	p	p	P	p	p	P	p	p	p	p	p	p	p	p	p
9	173557110025	G.LAKSHMI NARAYANA	p	p	P	p	p	P	p	p	p	p	p	p	p	p	p
10	173557110026	G.SIVA NAGA MANI	p	p	P	p	p	P	p	p	p	p	p	p	p	p	p
11	173557110029	K.RAKESH	p	p	P	p	p	P	p	p	p	p	p	p	p	p	p
12	173557110030	K.SYAM BABU	p	p	P	p	p	P	p	p	p	p	p	p	p	p	p
13	173557110031	K.LATHA	p	p	P	p	p	P	p	p	p	p	p	p	p	p	p
14	173557110034	P.HEMA LATHA	p	p	P	p	p	P	p	p	p	p	p	p	p	p	p
15	173557110036	V.LIKITHA	p	p	P	p	p	P	p	p	p	p	p	p	p	p	p
16	173557110037	Y.L.S.S.HARSHA	p	p	P	p	p	P	p	p	p	p	p	p	p	p	p

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Department of Zoology, 2018-19

Certificate course on Vermi Culture - Student Attendance Register

S. N O	Roll No.	Name of the Student	Attendance Days															
			16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
1	173557110014	A.SITA DEVI	p	p	p	P	p	p	p	p	p	p	p	p	p	p	p	
2	173557110017	B.JAYA SRI	p	p	p	P	p	p	p	p	p	p	p	p	p	p	p	
3	173557110018	B.LAVANYA	p	p	p	P	p	p	p	p	p	p	p	p	p	p	p	
4	173557110019	B.PRAKASH	p	p	p	P	p	p	p	p	p	p	p	p	p	p	p	
5	173557110020	B.RAJU	p	p	p	P	p	p	p	p	p	p	p	p	p	p	p	
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15	173557110036	V.LIKITHA	p	p	p	P	p	p	p	p	p	p	p	p	p	p	p	

173557110037

Y.L.S.S.HARSHA

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SRI ARAVINDA SATHAJAYANTHI GOVERNMENT DEGREE COLLEGE

NARAYANAPURAM, ELURU DISTRICT, ANDHRA PRADESH



CERTIFICATE OF COMPLETION

This is to certify that Mr/Ms.....A. SITA DEVI.....
 of.....III C.B.2.....class has Successfully completed certificate course in.....VERM. CULTURE.....
(20 hours) conducted from 2-2-2017 to 2-1-2018 by Department of Zoology.

[Signature]
 Course Co-ordinator

Department of Zoology

SAS GOVT. DEGREE COLLEGE
 NARAYANAPURAM-534 406

[Signature]
 IQAC
 Co-ordinator

[Signature]
 Principal

SAS GOVT. DEGREE COLLEGE
 NARAYANAPURAM

West Godavari District.
 Pin: 534 406, Andhra Pradesh



APR 14 1955

