



# **V. K. V. GOVERNMENT DEGREE COLLEGE, KOTHAPETA**

**(NAAC accredited with B grade and ISO certified College)**

**(An ISO 9001:2015 Certified College by HYM International Certifications Pvt.Ltd.)**



## **CERTIFICATE COURSE EVIDENCES-2018-19**

### **DEPARTMENT OF MATHEMATICS**

#### **CERTIFICATE COURSE**

#### **(VALUE ADDITION PROGRAMME)**

**Topic: OPERATIONS RESEARCH**

**Duration: From 01-11-2018 to 30-11-2018(30 days)**

**Conducted by  
Department of Mathematics**

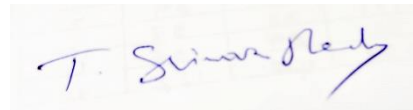
**Faculty Members:  
1. Sri.T. SRINIVASA REDDY,  
Head, Department of Mathematics**

**Place: Kothapeta,**

**Date: 25, OCT-2018.**

**NOTICE**

The Department of Mathematics is going to conduct a certificate course on **OPERATIONS RESEARCH** from 01-11-2018 to 30-11-2018. The students who are interested to join in add on course can give their names in the department of Mathematics on or before 28<sup>th</sup> OCT. 2018.



**T.SRINIVASA REDDY**

Head of the department of Mathematics

**Circulation to all faculty members**

**Circulation to all Classrooms**

# DEPARTMENT OF MATHEMATICS

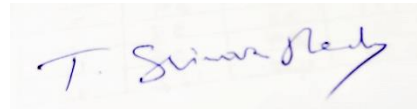
(2018-2019)

ADD ON PROGRAMME

(VALUE ADDITION PROGRAMME)

DETAILS OF FACULTY WHO HANDLED CLASSES

S.No.	Name and Designation	DATE	
		From	To
1	Sri.T. SRINIVASA REDDY, Head of the Department	01-11-2018	30-11-2018



Signature of the Head of the Department

# **“OPERATIONS RESEARCH”**

## **ADD ON PROGRAMME (VALUE BASED PROGRAMME)**

### **OBJECTIVES:**

The objectives of a certificate course in operations research typically include the following. After completion of this programme, student will be able to make

- ✓ Understanding Operations Research
- ✓ Problem-solving Skills:
- ✓ Decision Analysis:
- ✓ Application to Real-World Problems
- ✓ Software and Tools:
- ✓ Communication and Presentation Skills
- ✓ Ethical Considerations

### **METHODOLOGY:**

- Programme is to be conducted for 30-45 days
- Maximum strength for each Programme is 30
- Minimum strength for each Programme is 20.
- Classes are to be conducted for 1 hr. after college hours.
- Grand test is to be conducted at the end of the Programme.
- Every day student is to be given one assignment.
- On subsequent day feedback is to be obtained from each student on the performance of the previous day.

# **COURSE SYLLABUS (Duration: 4 weeks )**

## **UNIT-I :(i) Introduction to Operations Research**

- Definition and scope of Operations Research (OR)
- Historical development and applications of OR
- OR models and decision-making process

### **(ii) Mathematical Foundations**

- Linear algebra
- Calculus and optimization techniques
- Probability and statistics.

## **UNIT-II :Deterministic Optimization Models**

- Linear programming (LP) and its applications
- Integer programming (IP) and mixed-integer programming (MIP)
- Nonlinear programming (NLP)
- Network optimization models (e.g., shortest path, minimum spanning tree)

## **UNIT-III: Stochastic Models**

- Probability theory and distributions
- Markov chains and queuing theory
- Decision analysis under uncertainty
- Simulation modelling and analysis.

## **UNIT -IV:Game Theory**

- Introduction to game theory
- Two-player games and Nash equilibrium
- Cooperative and non-cooperative game theory

## **MODEL PAPER FOR FINAL EXAMINATION**

**TIME: 1 HOUR**

**MAX.MARKS: 20**

**M**

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**Answer any FOUR questions from the following. Each question carries FIVE marks.**

**4 x 5 = 20 Marks.**

- 1. What is the difference between probability and statistics?**
- 2. What are some common applications of deterministic optimization models?**
- 3. How are stochastic models different from deterministic models?**
- 4. What are the main components of a game in game theory?**
- 5. What are the advantages and limitations of deterministic optimization models?**
- 6. How is game theory applied in real-life situations?**

## DEPARTMENT OF MATHEMATICS

### CERTIFICATE COURSE / VALUE ADDITION PROGRAMME

1. Name of the Student:
2. Programme:
3. Combination (Group):
4. Roll No:
5. Economic Status (SC/ST/BC/OC):
6. Year of Study (Academic Year): 2018-2019.
7. Title of the Programme: OPERATIONS RESEARCH
8. Duration of the Programme: 30 days
9. Other information if any:

Signature of the Student

#### For office Purpose only

Registration No. :

Classes Handled by (Faculty Particulars)

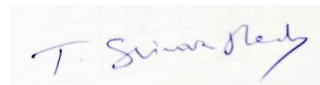
S.No.	Name of the Topic	Dates		Faculty Particulars
		From	To	
1	Mathematical Foundations	01-11-2018	06-11-2018	T. Srinivasa Reddy
2	Deterministic Optimization Models	07-11-2018	14-11-2018	T. Srinivasa Reddy
3	Stochastic Models	15-11-2018	22-11-2018	T. Srinivasa Reddy
4	Game Theory	23-11-2018	30-11-2018	T. Srinivasa Reddy

Signature of the Lecturer

## TOPIC: OPERATIONS RESEARCH

### ENROLLMENT OF STUDENTS, 2018-2019.

S.No.	Name of the Student	REGD.NUMBER	Programme/ Combination
1	AKULA DHANA RAJU	160558100001	II B.Sc (MPC)
2	APPARI VIJAYA BHASKAR	160558100002	II B.Sc (MPC)
3	ARIGELA SIVA KUMAR NANDA	160558100003	II B.Sc (MPC)
4	BANDARU DURGA	160558100004	II B.Sc (MPC)
5	B.R.S.CHANDRA RAO	160558100005	II B.Sc (MPC)
6	BULA KRUPA RATNAM	160558100006	II B.Sc (MPC)
7	CHINTALURI KALYAN SATYA PRIYA	160558100007	II B.Sc (MPC)
8	DONGA VENKATA RAMANA	160558100008	II B.Sc (MPC)
9	GOLLAPUDI MOUNIKA	160558100009	II B.Sc (MPC)
10	GORRI VENKATA GIRI	160558100010	II B.Sc (MPC)
11	GORRELA SAI MANIKANTA	160558100011	II B.Sc (MPC)
12	GUBBALA ESWARI	160558100012	II B.Sc (MPC)
13	GUBBALA SAI TEJA	160558100013	II B.Sc (MPC)
14	GUTTULA ARUNA	160558100014	II B.Sc (MPC)
15	GUTTULA SATISH KUMAR	160558100015	II B.Sc (MPC)
16	ILLA GANESH	160558100016	II B.Sc (MPC)
17	KADALI SAI KRISHNA	160558100017	II B.Sc (MPC)
18	K.RAVI KUMAR	160558100018	II B.Sc (MPC)
19	K.VEERA RAM DURGA PRAKASH	160558100019	II B.Sc (MPC)
20	K.CHINNAYYA	160558100020	II B.Sc (MPC)
21	K.MANO HAR	160558100021	II B.Sc (MPC)
22	K.PUSHPA LATHA	160558100022	II B.Sc (MPC)
23	LANKA GANGA BHAVANI	160558100023	II B.Sc (MPC)
24	M.R.S.N.V.GANAPATHI	160558100024	II B.Sc (MPC)
25	MUSHINI SIREESHA	160558100025	II B.Sc (MPC)



Signature of the Head of the Department





## DEPARTMENT OF CHEMISTRY

Place: Kothapeta,

Date: 24-06-2018

### NOTICE

The Department of Chemistry is going to offer a certificate course on **FOOD ADULTERATION** from **04-07-2018 to 07-08-2018**. The students who are interested can give their names in the department of chemistry on or before 04<sup>nd</sup> July, 2018.



Department of Chemistry

**ADD ON PROGRAMME**  
**(VALUE ADDITION PROGRAMME)**

**DETAILS OF FACULTY WHO HANDLED CLASSES**

S.No.	Name of the Topic	Dates		Faculty Particulars
		From	To	
1	Various Types of Food Adulteration	04-07-2018	07-08-2018	Sri. K.Sarveswara Rao
2	Adulteration of common Foods	04-07-2018	07-08-2018	Dr. V. Ranga Rao
3	Consequences of adulteration, Present Laws and procedures on Adulteration	04-07-2018	07-08-2018	Smt. M.Padmaja

**(FOOD ADULTERATION)**

**SYLLABUS**

**Hours: - 30**

**Course Learning Outcomes:**

**After successful completion of the course, students will be able to,**

1. Imparting basic knowledge on various foods and about adulteration.
2. Understand the adulteration of common foods and their adverse impact on health
3. Understand certain skills of detecting adulteration of common foods.
4. Knowing the basic laws and consumer protection, detection and remedies

**Unit-I : Various Types of Food Adulteration:** Common foods subjected to adulteration- Definitions-Types, poisonous substances, Foreign matter, Cheap substitutes.

**Unit-II: Adulteration of common Foods:** Common foods-Milk, Oil, Spices, Sugar, Fruits and vegetables. Additives and sweetening agents.

**Unit-III: Consequences of adulteration :** General impact on Human Health, Lack of nutrition Values in various foods.

**Unit-IV:Present Laws and procedures on Adulteration:** Food safety and standards authority of India-Role of voluntary agencies such as Agmarks, I.S.I

## Certificate Course – FOOD ADULTERATION

### Question paper

**Time:-25 mints**

**Max marks:-50**

**Answer all MCQs each question carries Two marks**

1. Which of the following is a common adulterant found in milk?  
a) Starch      b) Urea      c) Lead      d) All of the above
2. Food adulteration refers to the process of:  
a) Adding nutrients to food products    b) Removing harmful substances from food products  
c) Intentionally adding inferior or harmful substances to food products  
d) None of the above
3. Which of the following is a common adulterant found in honey?  
a) Glucose    b) Sand    c) Formalin    d) All of the above
4. Which food item is commonly adulterated with water?  
a) Tea leaves    b) Coffee beans    c) Ground spices    d) All of the above
5. Adulteration of olive oil is often done by adding:  
a) Palm oil    b) Sunflower oil    c) Mustard oil    d) Coconut oil
6. Which of the following is a commonly adulterated spice?  
a) Turmeric    b) Cumin    c) Paprika    d) All of the above
7. Adulteration of sugar is often done by adding:  
a) Chalk powder    b) Sand    c) Salt    d) Artificial sweeteners
8. Which of the following is a common adulterant found in ground black pepper?  
a) Sawdust    b) Red chili powder    c) Soy flour    d) All of the above
9. Adulteration of saffron is often done by adding:

a) Turmeric powder b) Corn silk c) Artificial dyes d) All of the above

10. Which of the following fruits is commonly subjected to adulteration by artificial ripening agents?

a) Bananas b) Apples c) Oranges d) Grapes

11. Adulteration of spices like cloves and cinnamon is often done by adding:

a) Brick powder b) Rice flour c) Dried leaves d) All of the above

12. Which of the following is a common adulterant found in ground coffee?

a) Chicory powder b) Cocoa powder c) Ground almonds d) All of the above

13. Adulteration of honey with sugar syrup can be detected by performing a test called:

a) Iodine test b) Benedict's test c) Fehling's test d) Caramelization test

14. Adulteration of edible oils with low-quality oils or recycled oils is known as:

a) Oil blending b) Oil fortification c) Oil adulteration d) Oil extraction

15. Which of the following is a common adulterant found in red chili powder?

a) Brick powder b) Cornstarch c) Beetroot powder d) All of the above

16. Adulteration of powdered spices with artificial colors can be detected using:

a) Ultraviolet (UV) light b) pH paper c) Microscope d) Magnet

17. Adulteration of fruit juices is often done by adding:

a) Water b) Artificial flavors c) Preservatives d) All of the above

18. Which of the following is a common adulterant found in honeycomb?

a) Wax b) Sawdust c) Gelatin d) All of the above

19. Adulteration of wine with water or other liquids is known as:

a) Wine blending b) Wine fermentation c) Wine dilution d) Wine adulteration

20. Adulteration of fish can be done by adding:

a) Formaldehyde b) Mercury c) Antibiotics d) All of the above

21. Adulteration of wheat flour with chalk powder can be detected by performing a test called:

a) Acid test b) Salt test c) Iodine test d) Vinegar test

22. Which of the following is a common adulterant found in ground turmeric?

a) Metanil yellow dye b) Sand c) Synthetic colors d) All of the above

23. Adulteration of butter with vegetable oil is known as:

a) Butter adulteration b) Margarine c) Ghee adulteration d) Oil infusion

24. Adulteration of rice with stones or pebbles can be detected by performing a test called:

a) Float test b) Boiling test c) Starch test d) Color test

25. Adulteration of meat products with water is known as:

a) Meat dilution b) Meat blending c) Meat hydration d) Meat adulteration

## **Model Certificate**



## DEPARTMENT OF CHEMISTRY

### Certificate Course – FOOD ADULTERATION

#### MARKS AWARD LIST 2018-19

S.No	Name of the Student	RGD No.	Programme/ Combination	Max. Marks	Marks Awarded
1	S. Devi	160557101021	B.Sc., (M.P.C)	50	40
2	ASN Kameswari	160557101003	B.Sc., (M.P.C)	50	41
3	Ch. Anusha	160557101007	B.Sc., (M.P.C)	50	32
4	S. Nageswari	160557101022	B.Sc., (M.P.C)	50	42
5	R. Sai geetha	160557101021	B.Sc., (M.P.C)	50	38
6	B. Mahendra	160557101006	B.Sc., (M.P.C)	50	37
7	B. Nagendra	160557101004	B.Sc., (M.P.C)	50	40
8	M. Ravi Prakash	160557101012	B.Sc., (M.P.C)	50	41
9	P.T. Nagendra	160557101018	B.Sc., (M.P.C)	50	32
10	P.Sandhya	160557101017	B.Sc., (M.P.C)	50	29
11	A.V. Ramana	160557101001	B.Sc., (M.P.C)	50	32
12	MNVJCS Kiran	160557101013	B.Sc., (M.P.C)	50	41
13	B. Venkanna Babu	160557101009	B.Sc., (M.P.C)	50	28
14	N.V.Surya Prakash	160087101038	B.Sc., (M.P.C)	50	35
15	J. N.Subbalakshmi	160557110047	B.Sc., (C.B.Z)	50	45
16	N.Divya	160557110055	B.Sc., (C.B.Z)	50	41
17	G. Amrutha	160557110041	B.Sc., (C.B.Z)	50	36
18	G.Sandhya	160557110042	B.Sc., (C.B.Z)	50	40
19	V. Divya	160557110059	B.Sc., (C.B.Z)	50	42
20	G.Naga Bhavani	160557110045	B.Sc., (C.B.Z)	50	34
21	M. Mounika	160557110051	B.Sc., (C.B.Z)	50	32

Head of the Department



## DEPARTMENT OF CHEMISTRY

Certificate Course – FOOD ADULTERATION

**ATTENDANCE SHEET 2018-19 (04-07-2018 to 07-08-2018)**

S.No	Name of the Student	RGD No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	S. Devi	160557101021	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P
2	ASN Kameswari	160557101003	P	A	P	P	P	A	P	P	P	P	A	A	P	P	P
3	Ch. Anusha	160557101007	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
4	S. Nageswari	160557101022	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P
5	R. Sai geetha	160557101021	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P
6	B. Mahendra	160557101006	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
7	B. Nagendra	160557101004	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
8	M. Ravi Prakash	160557101012	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
9	P.T. Nagendra	160557101018	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P
10	P.Sandhya	160557101017	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P
11	A.V. Ramana	160557101001	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P
12	MNVJCS Kiran	160557101013	P	A	P	P	P	A	P	P	P	P	A	A	P	P	P
13	B. Venkanna Babu	160557101009	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
14	N.V.Surya Prakash	160087101038	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P
15	J. Naga subbalakshmi	160557110047	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P
16	N.Divya	160557110055	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
17	G. Amrutha	160557110041	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
18	G.Sandhya	160557110042	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
19	V. Divya	160557110059	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P
20	G.Naga Bhavani	160557110045	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21	M. Mounika	160557110051	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P



Head of the Department

### ATTENDANCE SHEET 2018-19 (04-07-2018 to 07-08-2018)

S.No	Name of the Student	RGD No.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	S. Devi	160557101021	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
2	ASN Kameswari	160557101003	P	A	P	P	P	A	P	A	P	P	P	A	P	A	A
3	Ch. Anusha	160557101007	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
4	S. Nageswari	160557101022	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
5	R. Sai geetha	160557101021	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
6	B. Mahendra	160557101006	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
7	B. Nagendra	160557101004	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
8	M. Ravi Prakash	160557101012	P	A	P	P	P	P	P	P	P	A	P	A	P	A	A
9	P.T. Nagendra	160557101018	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
10	P.Sandhya	160557101017	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
11	A.V. Ramana	160557101001	P	A	P	P	P	A	P	A	P	P	P	A	P	A	A
12	MNVJCS Kiran	160557101013	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
13	B. Venkanna Babu	160557101009	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
14	N.V.Surya Prakash	160087101038	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
15	J. Naga subbalakshmi	160557110047	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
16	N.Divya	160557110055	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
17	G. Amrutha	160557110041	P	A	P	P	P	P	P	P	P	A	P	A	P	A	A
18	G.Sandhya	160557110042	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
19	V. Divya	160557110059	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
20	G.Naga Bhavani	160557110045	P	A	P	P	P	P	P	P	P	A	P	A	P	A	A
21	M. Mounika	160557110051	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P



Head of the Department

**DEPARTMENT OF HISTORY**  
**CERTIFICATE COURSE – 2018-19**

**TOURISM RESOURCES IN INDIA**



**Period: 12-11-2018 to 18-12-18**

**Timings: 03:00pm -04:30pm**

# **TOURISM RESOURCES IN INDIA**

**Duration: 1 Month**

**Total Hours: 20**

## **LERNING OUTCOMES :**

- Learning Outcomes:
- The students are enabled to:
- Estimate the relevance of Tourism Resources to the development of Tourism
- Identify the factors that help to promote and hinder the development of Tourism
- Analyze the multidimensional activities of Tourism industry
- Compare and assess the natural, cultural and man-made attractions of Tourism
- Identify the various touristic sites and significance to the development of Tourism
- Respect and guard various resources of Tourism
- Promote Heritage Tourism

## **TOURISM RESOURCES IN INDIA**

### **SYLLABUS**

#### UNIT-I

Knowledge of history and its importance in tourism,

Brief outline of Indian history in ancient, medieval and modern period and growth and development of travel related activity.

#### Unit-2

British rule and genesis of modern tourism in India,

Art and architecture of tourism significant India

#### Unit-3

World Heritage monuments and other prominent monuments of India , Religious Tourism resources-Cultural tourism resource.

#### Unit -4

Brief study of National Parks and Wildlife Sanctuaries, Major hill station, Important Sea Beaches of India,

#### Unit-5

Adventure Sports: Jungle bells, Maredumilli, Lonavala, Munnar, Kodaikanal&Ooty, Shimla, Arunachal Pradesh, Uttarakhand, Sikkim, J&K

## **COURSE MODEL QUESTION PAPER– THEORY**

Time: 2 Hours

Max. Marks: 50M

### **SECTION-A**

**I. Answer any TWO of the following questions. 2 x15 = 30M**

1. Describe the Brief outline of Ancient History of tourism in India
2. Elaborate the Tourism Fairs and Festivals in Andhra Pradesh?
3. Explain the important Buddhist Circuits in India.

### **SECTION-B**

**II. Answer any TREE of the following questions. 3x 5 = 15 M**

- 4) What is a Pushkaram?
- 6) World Heritage monuments
- 5) Religious Tourism resources
- 7) National Parks and Wildlife sanctuaries

### **SECTION-C**

**III. Fill in the blanks with appropriate answers 5x1=5 M**

8. How many National parks in India-----
9. 40<sup>th</sup> UNESCO world heritage site -----
10. Andhrapradesh Newyear festival is called-----
11. Gunadala festival held in-----
12. Marina beach is located in which state-----

## REGISTERED STUDENTS LIST

S. NO	REGISTRATION NUMBER	NAME OF THE STUDENT	GROUP
1	160556201001	A.GANGA RAJU	III.BA(HEP)
2	160556201002	A.NAVEEN	III.BA(HEP)
3	160556201003	A.RAVI KUMAR	III.BA(HEP)
4	160556201006	B.VENKATA RAMANA	III.BA(HEP)
5	160556201007	CH.KUMAR	III.BA(HEP)
6	160556201008	CH.SRI LAKSHMI	III.BA(HEP)
7	160556201009	D.VEERA BRAHMENDRA	III.BA(HEP)
8	160556201010	D.RAJU	III.BA(HEP)
9	160556201011	G.BUJJAMMS	III.BA(HEP)
10	160556201012	G.DURGAYYA	III.BA(HEP)
12	160556201014	J.JYOTHI	III.BA(HEP)
13	160556201015	K.JYOTHI	III.BA(HEP)
14	160556201016	K.SANDHYA	III.BA(HEP)
15	160556201017	K.SRIKANTH	III.BA(HEP)
16	160556201018	M.ANIL KUMAR	III.BA(HEP)
17	160556201019	M. DURGA	III.BA(HEP)
18	160556201020	M.PRAVEEN	III.BA(HEP)
19	160556201031	P. NAGA BABU	III.BA(HEP)
20	160557101004	SADANALA DEVI	III BSC (MPC)
21	160557101003	A.S.N. KAMESWARI	III BSC(MPC)
22	160557101007	CH.ANUSHA	III BSC (MPC)
23	160557101022	S.NAGESWARI	III BSC(MPC)
24	160557101020	R.SAI GEETHA	III BSC (MPC)
25	160557101002	A.CHANDU SRI	III BSC(MPC)
26	160557101011	K.YOJANA PRIYA	III BSC (MPC)
27	160557101014	N.JAYA KUMARI	III BSC(MPC)
28	160557101016	P.NAGA LAKSHMI	III BSC (MPC)
29	160557101018	CH. BABY PRASANNA	III BSC(MPC)
30	160557102024	A.PRAJNA SRI	III BSC (MPCs)
31	160557102039	T.BRAMARAMBA	III BSC(MPCs)
32	160557102025	P.NAGA SAI	III BSC (MPCs)
33	160557102032	I.SATYA SAI	III BSC(MPCs)
34	160557102035	I.PALLAVI	III BSC (MPCs)



# ATTENDANCE REGISTER

30		STUDENTS ATTENDANCE REGISTER			
NAME OF THE STUDENT		11/11/19	12/11/19	13/11/19	14/11/19
1000	A. Ganga Raju	P	P	A	P
1001	A. Naveen	P	P	A	P
1002	A. Ravi Kumar	P	A	A	A
1003	B. Venkata Ramana	A	A	P	A
1004	B. Kumari	P	P	P	P
1005	Ch. Sai Lakshmi	P	P	P	P
1006	D. Veera Brahmendra	A	A	P	P
1007	D. Raju	A	A	P	A
1008	G. Sujamma	P	P	P	P
1009	G. Durgayya	P	P	P	P
1010	I. Chandu Babu	P	P	P	P
1011	J. Jyothi	P	P	P	P
1012	K. Jyothi	P	P	P	P
1013	K. Sandhya	A	A	P	P
1014	K. Sairam	P	P	P	P
1015	M. Anil Kumar	P	P	P	P
1016	M. Durga	A	A	P	P
1017	M. Praveen	P	P	P	P
1018	P. Naga Babu	A	A	P	P
1019	S. Devi	P	P	P	P
1020	A. S.N. KAMESWAR	P	P	P	P
1021	Ch. Anusha	P	P	P	A
1022	S. NAGESWAR	P	P	P	A
1023	R. SAI GEETHA	A	A	P	P
1024	A. CHANDU SRI	P	P	P	A
1025	K. YOSHANA PRIYA	P	P	P	A
1026	N. JAYA KUMARI	P	P	P	A
1027	P. NAGA LAKSHMI	P	P	P	P
1028	CI-SABY PRASANNA	P	P	P	P
1029	A. PRADINA SRI	A	A	P	P
1030	T. BRAMARAMBA	P	P	A	P
1031	P. NAGA SAI	A	P	P	P
1032	I. SATYA SAI	P	P	A	A
1033	I. PALLAVI	P	P	P	A

29		11/11/19	12/11/19	13/11/19	14/11/19	15/11/19	16/11/19	17/11/19	18/11/19	19/11/19	20/11/19	21/11/19	22/11/19	23/11/19	24/11/19	25/11/19	26/11/19	27/11/19	28/11/19	29/11/19
1001	P	A	P	A	P	P	P	P	P	P	A	P	A	P	P					
1002	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1003	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1004	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1005	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1006	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1007	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1008	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1009	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1010	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1011	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1012	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1013	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1014	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1015	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1016	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1017	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1018	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1019	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1020	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1021	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1022	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1023	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1024	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1025	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1026	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1027	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1028	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1029	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1030	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1031	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1032	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					
1033	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P					

32		11/11/19	12/11/19	13/11/19	14/11/19	15/11/19	16/11/19	17/11/19	18/11/19	19/11/19	20/11/19	21/11/19	22/11/19	23/11/19	24/11/19	25/11/19	26/11/19	27/11/19	28/11/19	29/11/19
1001	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1002	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1003	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1004	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1005	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1006	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1007	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1008	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1009	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1010	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1011	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1012	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1013	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1014	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1015	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1016	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1017	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1018	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1019	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1020	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1021	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1022	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1023	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1024	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1025	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1026	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1027	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1028	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1029	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1030	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1031	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1032	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
1033	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					

*[Handwritten signature]*

**ISSUED CERTIFICATE TO THE STUDENTS**

**DEPARTMENT OF ZOOLOGY**

**2018-2019**

**ADD ON PROGRAMME/VALUE ADDITION PROGRAMME**



**V.K.V. GOVERNMENT DEGREE COLLEGE  
KOTHAPETA**

ACCREDITED BY NAAC 'B' GRADE



**This is to certify that Mr./Ms  
..... studying.....  
his/her has successfully completed ONE MONTH certificate  
course in A conducted by Department of History, TOURISM  
RESOURCES IN INDIA from 12-11-2018 to 18 -12-2019**

  
LECTURER IN HISTORY



  
PRINCIPAL

## DEPARTMENT OF ZOOLOGY

### ADD ON PROGRAMME/VALUE ADDITION PROGRAMME

1. Name :
2. Programme :
3. Combination :
4. Roll No. :
5. Economic Status (SC/ST/BC/OC) :
6. Year of Study (Academic Year) :2018-2019
7. Title of the programme : Vermicompost
8. Duration of the programme : 30 days
9. Other information if any :

Signature of the Student

### For office Purpose only

Registration No. :

Classes Handled by (Faculty Particulars)

S.No.	Name of the Topic	Dates		Faculty Particulars
		From	To	
1				
2				
3				
4				

## V. K. V. GOVERNMENT DEGREE COLLEGE, KOTHAPETA

(NAAC accredited with B grade and ISO certified college)

### Department of Zoology

#### ADD ON PROGRAMME/VALUE ADDITION PROGRAMME

1. Name :  
2. Programme : B.Sc  
3. Combination : CBZ  
4. Rgd No. :  
5. Economic Status(SC/ST/BC/OC) :  
6. Year of Study (Academic Year) :2018-2019  
7. Title of the programme : Vermicompost  
8. Duration of the programme : 30 days  
9. Other information if any :

Signature of the Student

#### For office Purpose only

Registration No. :

Classes Handled by (Faculty Particulars)

S.No.	Name of the Topic	Dates		Faculty Particulars
		From	To	
1	Annelid general characters & classification	01-03-19	10-03-19	T. Timothy
2	Earth worm type study	11-03-19	20-03-19	Ch. Vijayalakshmi
3	Vermicompost	21-03-19	31-03-19	T. Timothy

## DEPARTMENT OF ZOOLOGY

### ADD ON PROGRAMME/VALUE ADDITION PROGRAMME

Topic: **VERMICOMPOST**

### ENROLLMENT OF STUDENTS 2018-2019

S.No.	Name of the Student	Programme/Combination
1	G.AMRUTHA	III C.B.Z
2	G.SANDHYA	III C.B.Z
3	G.G.RATNAM	III C.B.Z
4	G.V KUMARI	III C.B.Z
5	G.N. BHAVANI	III C.B.Z
6	I.SUDHARANI	III C.B.Z
7	J.NAGA SUBBALAKSHMI	III C.B.Z
8	J.LAVANYA	III C.B.Z
9	K.JHANSI	III C.B.Z
10	N.ASHA	III C.B.Z
11	N.DIVYA	III C.B.Z
12	P.SIVA SREE	III C.B.Z
13	P.D BHAVANI	III C.B.Z
14	SK.SILAR BIBI	III C.B.Z
15	J.K.RANI	III C.B.Z



Department of Zoology

## DEPARTMENT OF ZOOLOGY

Kothapeta

28-02-2019

### NOTICE

The Department of zoology is going to offer a certificate course on vermicompost from 01-03-2019 to 31-03-2019. The students who are interested can give their names in the department of zoology on or before 1<sup>st</sup>March 2019.

A handwritten signature in green ink, appearing to read 'Ch. Nijender', is written on a light-colored rectangular background.

Department of zoology



# V.K.V GOVERNMENT DEGREE COLLEGE KOTHAPETA

(Accredited by NAAC "B"Grade)

(An ISO 9001:2015 Certified College by HYM International Certifications Pvt.Ltd.)



## DEPARTMENT OF ZOOLOGY

### Syllabus

**Vermicompost certificate course**

**Hours: - 30**

#### Unit-I

1-General characters of annelida

2-Classification of annelida

#### Unit-II

1-Earth worm morphology

2-Excretory System in earth worm

#### Unit-III

1-Vermicompost

2- Suitable worm species for Vermicompost

#### Unit-IV

1-Types of vermicompost

2-Harvesting of vermicompost

#### Unit-V

1-Operation and maintenance

2-Uses of vermicompost



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## DEPARTMENT OF ZOOLOGY

### Vermicompost certificate course

#### Model question paper

Time:-90 mints

Max marks:-50

Answer any Five questions

Draw labeled diagrams wherever necessary 5x10=50

1. Write notes on the General characters of annelida
2. Write notes on the classification of annelida
3. Describe the Earth worm morphology
4. Describe the Earth worm excretory system
5. Define the vermicompost and write notes on the vermicompost
6. Explain the Suitable worm species for Vermicompost
7. Write notes on the Types of vermicompost
8. Explain the Harvesting of vermicompost
9. Describe Operation and maintenance of vermicompost
10. Describe Uses of vermicompost

# Syllabus

## Vermicompost certificate course

### Annelida

Phylum Annelida is a very broad phylum belonging to the kingdom Animalia. The Annelids are found in aquatic as well as terrestrial environments. These are bilaterally symmetrical invertebrate organisms. Their segmented body distinguishes them from any other organism.

#### Phylum Annelida

### Characteristics of Annelida

The characteristics of the organisms present in the Phylum Annelida are as follows:

1. The Annelids are coelomate and triploblastic.
2. They exhibit organ system level organization.
3. Their body is segmented.
4. They respire through their body surface.
5. Nephridia are the excretory organs.
6. They have a well-developed circulatory and digestive system.
7. Their body contains haemoglobin, which gives them a red colour.
8. Regeneration is a very common characteristic of the Annelids.
9. Setae help them in movement.
10. Most of the Annelids are hermaphrodite, i.e., male and female organs are present in the same body. They reproduce both sexually and asexually. The others reproduce sexually.
11. Eg., Earthworms, and leeches

### Classification of Annelida

Following are the different classification of Annelida:

- Polychaeta
- Oligochaeta
- Hirudinea
- Archiannelida

#### Polychaeta

- The body is elongated and divided into segments.
- They are found in the marine environment.
- These are true coelomates, bilaterally symmetrical worms.
- They excrete through metanephridia and protonephridia.
- Fertilization is external.
- They have a well-developed nervous system.
- The circulatory system is closed type.
- They are hermaphrodites.
- They might possess fin-like appendages called parapodia.
- The organisms belonging to this group lack clitellum and are dioecious.
- Eg., Nereis, Syllis

#### Oligochaeta

- They are mostly freshwater and terrestrial organisms.
- The body is segmented metamerically.
- Head, eyes and tentacles are not distinct.
- They are hermaphrodites, but cross-fertilization takes place.
- Fertilization is external.
- Cocoon formation occurs.
- Setae are segmented.
- They do not possess parapodia but clitellum is present.
- The organisms belonging to this class are monoecious.
- They exhibit no free larval stage and the development takes place inside the cocoons.
- Eg., Pheretima, Tubifex

#### Hirudinea

- Most commonly found in freshwater. Some are marine, terrestrial, and parasitic.
- The body is segmented.
- The tentacles, parapodia, and setae are not present.
- The animals are monoecious.
- The body is dorsoventrally or cylindrically flattened.
- They have an anterior and posterior sucker on the ventral side.



