OUTCOME OF THE COURSE

- Help to promote the need of cultivation and conservation of Medicinal and Ornamental plants.
- Help to provide basic training in medicinal and ornamental plants in tune with the Ayurvedic and floriculture practices.
- Help to aware the students about the quality of Ayurvedic products and to generate Ayurveda-based self employment opportunities.

DEPARTMENT OF BOTANY
CMS COLLEGE KOTTAYAM (AUTONOMOUS)

MEDICINAL AND ORNAMENTAL PLANTS

Value Added Course
for the academic year 2017-18

Academic year: 2017-2018.

CAREER ORIENTED PROGRAMMES (*ADD-ON COURSES*) PROFORMA

1.	Name of the Course.	**Advanced Diploma Course**
2.	Name of the Co-ordinator With Mobile Number & E-mail ID.	Dr. Hari N. Mob. No: 8547591199. e-Mail ID: *hari@cmscollege.ac.in*
3.	UGC Sanction order & Date.	F.No.4-500/2013 (COC) Dated. 31st December-2014.
4.	Amount Sanctioned (Rs.).	Rs. 9, 00,000/- (Nine Lakh Only).
5.	Number of Students enrolled In 2017-2018.	-41-
	a). Certificate Course.	-NA-
	b). Diploma Course.	-NA-
	c). Advanced Diploma Course.	-41-
6.	Total Number of enrolment from the Commencement to till date.	a). Certificate : -NA- b). Diploma : -NA- c). Advanced Diploma : -32-
7.	Percentage of Students who Successfully completed the course.	**-32-**
8.	Number of Students who achieved a career on the basis of this course.	*10%*
9.	Other details, if any	-NA-

Category wise Students Profile (*who successfully completed the course*):

Gender (Male/Female)		General	OBC	OEC	SC/ST	Rural	Urban
-07-	-25-	-10-	-11-	-07-	-04-	-24-	-08-

Place: Kottayam-01.

Date:

NB: Separate Performa may be used for each Course.

Principal

Principal, C.M.S College, Kottayam

Academic year: 2017-2018.

CAREER ORIENTED PROGRAMMES (*ADD-ON COURSES*) PROFORMA

1.	Name of the Course.	**Certificate Course**
2.	Name of the Co-ordinator With Mobile Number & E-mail ID.	Dr. Hari N. Mob. No: 8547591199. e-Mail ID: *hari@cmscollege.ac.in*
3.	UGC Sanction order & Date.	F.No.4-500/2013 (COC) Dated. 31st December-2014.
4.	Amount Sanctioned (Rs.).	Rs. 9, 00,000/- (Nine Lakh Only).
5.	Number of Students enrolled In 2017-2018.	-46-
	a). Certificate Course.	-46-
	b). Diploma Course.	-NA-
	c). Advanced Diploma Course.	-NA-
6.	Total Number of enrolment from the Commencement to till date.	a). Certificate : -46- b). Diploma : -NA- c). Advanced Diploma : -NA-
7.	Percentage of Students who Successfully completed the course.	**-46-**
8.	Number of Students who achieved a career on the basis of this course.	*10%*
9.	Other details, if any	-NA-

Category wise Students Profile (*who successfully completed the course*):

Gender (Male/Female)		General	OBC	OEC	SC/ST	Rural	Urban
-06-	-40-	-19-	-13-	-06-	-08-	-30-	-16-

CMS COLLEGE AUTONOMOUS KOTTAYAM

Place: Kottayam-01.

Date:

NB: Separate Performa may be used for each Course.

Principal

Principal, C.M.S College, Kottayam

Academic year: 2017-2018.

CAREER ORIENTED PROGRAMMES (*ADD-ON COURSES*) PROFORMA

1.	Name of the Course.	**Diploma Course**
2.	Name of the Co-ordinator With Mobile Number & E-mail ID.	Dr. Hari N. Mob. No: 8547591199. e-Mail ID: *hari@cmscollege.ac.in*
3.	UGC Sanction order & Date.	F.No.4-500/2013 (COC) Dated. 31st December-2014.
4.	Amount Sanctioned (Rs.).	Rs. 9, 00,000/- (Nine Lakh Only).
5.	Number of Students enrolled In 2017-2018.	-39-
	a). Certificate Course.	-NA-
	b). Diploma Course.	-39-
	c). Advanced Diploma Course.	-NA-
6.	Total Number of enrolment from the Commencement to till date.	a). Certificate : -NA- b). Diploma : -39- c). Advanced Diploma : -NA-
7.	Percentage of Students who Successfully completed the course.	**-39-**
8.	Number of Students who achieved a career on the basis of this course.	*10%*
9.	Other details, if any	-NA-

Category wise Students Profile (*who successfully completed the course*):

Gender (Male/Female)		General	OBC	OEC	SC/ST	Rural	Urban
-10-	-29-	-13-	-08-	-12-	-06-	-33-	-06-

Place: Kottayam-01.

Date:

NB: Separate Performa may be used for each Course.

C.M.S COLLEGE KOTTAYAM AUTONOMOUS

Principal

Principal, C.M.S College, Kottayam

ADD-ON COURSE IN BOTANY

(Career Oriented Programme)

Floriculture [*Dry-flower arrangements*]

UNIVERSITY GRANTS COMMISSION
NEW DELHI

Career Oriented Programme

Syllabus for
Certificate/ Diploma/ Advanced Diploma Course in

DEPARTMENT OF BOTANY
CMS COLLEGE
KOTTAYAM
KERALA- 686001

.....

MAHATMA GANGHI UNIVERSITY
PRIYADARSHINI HILLS, KOTTAYAM
KERALA-686560

Certificate/ Diploma/ Advanced Diploma Course in Medicinal and Ornamental Plants.

(The career oriented programme is framed for 20 Credits for each course. Classes will be conducted on Saturdays)
Fees: Rs- 1000/Year

Objectives of the Career oriented programme

This programme was designed with the following objectives:

1. To promote cultivation and conservation of medicinal and ornamental plants.

2. To provide basic training in medicinal and ornamental plants in tune with the flourishing Ayurvedic and floriculture industries in Kerala.
3. To meet the increasing demands of trained personals in Ayurvedic and Floriculture industries.
4. To improve the quality of ayurvedic products and to generate Ayurveda based self employment opportunities
5. To generate a new generation of medicinal plant specialists who can translate Traditional knowledge in the light of advancement in modern medicine.

Pre-requisites:

Candidate should have passed higher secondary or its equal in science stream and should have an aptitude for medicinal and floriculture.

CERTIFICATE COURSE- FIRST YEAR		
Distribution of papers	Hours	Credits
Theory: Paper 1- Medicinal and Aromatic Plants- 1	90 Hrs	06
Theory: Paper 2-Floriculture -1	90 Hrs	06
Paper 3. Practical and Field Work	120 Hrs	08
Total	300 Hrs	20
DIPLOMA COURSE- SECOND YEAR		
Distribution of papers	Hours	Credits
Theory: Paper 1- Medicinal and Aromatic Plants- 2	90 Hrs	06
Theory: Paper 2-Floriculture- 2	90 Hrs	06
Paper 3. Practical and Field Work	120 Hrs	08
Total	300 Hrs	20
ADVANCED DIPLOMA COURSE- THIRD YEAR		
Distribution of papers	Hours	Credits

Theory: Paper 1- Phytochemical application of crude drugs with special reference to Ayurveda.	90 Hrs	06
Theory: Paper 2- Floriculture- 3.	90 Hrs	06
Paper 3. Practical and Field Work.	120 Hrs	08
Total	300 Hrs	20

CERTIFICATE COURSE- FIRST YEAR (300 Hrs, 20 Credits)

Paper 1- Medicinal and Aromatic Plants- 1 (90 Hrs, 06 Credits)

Module 1. Introduction to major medicinal plants.

AYUSH- Ayurveda (3hrs), Yoga (3hrs), Uanani (3hrs), Siddha (3hrs), Homeopathy (3hrs) **(15 hrs)**

Module 2. Major Medicinal group of plants:-

1. Dasamoola (6hrs)
2. Dasapushpam (6hrs)
3. Nalpamara (3hrs)
4. Panchamoola (3hrs)
5. Panchapallava m (3hrs)
6. Trikadu (3hrs)
7. Triphala (3hrs) **(27 hrs)**

Module 3. Factors leading to deterioration of quality of drugs. **(03 hrs)**

Module 4. Common Ayurvedic preparations:-

1. Choorna (3hrs)
2. Ghrita (3hrs)
3. Kashaya (3hrs)
4. Lehya (3hrs)
5. Taila (3hrs) **(15 hrs)**

Module 5. Cultivation and medicinal uses of:-

1. Adhatoda (3hrs)
2. Andrographis (3hrs)
3. Asoca (3hrs)
4. Bael (3hrs)
5. Brahmi (3hrs)

6. Castor (3hrs)
7. Cinnomon (3hrs)
8. Ginger (3hrs)
9. Tinospora (3hrs)
10. Turmeric (3hrs) **(30 hrs)**

Paper 2- Floriculture- 1 (90 Hrs, 06 Credits)

Module 1. Introduction (3 hrs), Importance and scope of floriculture (6 hrs), Present status of floriculture in India (3 hrs). **(12hrs)**

Module 2. Classification of Ornamental plants (3 hrs).
Importance, Scope, Origin, Botanical and common name of cultivars (25 minimum). **(28hrs)**

Module 3. Cut flowers and its importance (6 hrs), selection of cultivars for cut flower (8 hrs). **(14 hrs)**

Module 4. Principles of flower arrangements:-

1. Bouquet making (3 hrs)
2. Bridal makes (3 hrs)
3. Car decorations (3 hrs)
4. Wreath making (3 hrs) **(12hrs)**

Module 5. Cultivation of Ornamental plants:-

1. Cold frame (6 hrs)
2. Green house (6 hrs)
3. Hot beds (6 hrs)
4. Poly house (6 hrs) **(24 hrs)**

Paper- 3 Practical and field work (120 Hrs, 08 credits)

1. Working knowledge and identification of garden tools and implements.

2. Different propagation techniques:-
    a. Cutting and other vegetative parts
    b. Seeds
    c. Layering
    d. Budding
    e. Grafting

3. Different types of flower arrangements according to Japanese and Western Style.

4. Preparation of herbarium of common medicinal plants and dried specimens.

5. Visit a well maintained medicinal plant garden in Ayurvedic industry

and submit an industrial visit report.

DIPLOMA COURSE- SECOND YEAR (300Hrs, 20 Credits)

Paper 1- Medicinal and aromatic plants- 2 (90 hrs, 06 Credits)

Module 1. Cultivation of Medicinal plants:-

1. *Adhatoda zeylanica (3hrs)*
2. *Aloe vera (3hrs)*
3. *Alpinia galanga (3hrs)*
4. *Andrographis paniculata (3hrs)*
5. *Asparagus racemosa (3hrs)*
6. *Bacopa monnieri (3hrs)*
7. *Centella asitica (3hrs)*
8. *Cissus quadrangulari s (3hrs)*
9. *Piper longum (3hrs)*
10. *Piper nigrum (3hrs)*
11. *Plumbago zeylanica (3hrs)*
12. *Pogostemon pacholi (3hrs)* **(36hrs)**

Module 2. Cultivation of Ornamental Plants:-

1. Heliconia (3hrs)
2. Jasmine (3hrs)
3. Orchid (3hrs)
4. Rose (3hrs) **(12 hrs)**

Module 3. Cultivation of Medicinal Hedge:-

1. *Acalypha fruticosa* (3hrs)
2. *Adhatoda zeylanica* (3hrs) **(6 hrs)**

Module 4. Cultivation of Medicinal Lawn:-

1. *Centella asiatica* (3hrs)
2. *Cyanadon dactylon* (3hrs) **(6hrs)**

Module 5. Construction of herbal hut (Parnakudeeram):-

1. *Alangium salvifolium* (3hrs)
2. *Asparagus racemosus* (3hrs) **(6 hrs)**

Module 6. Cultivation of flowering medicinal trees as avenue plants:-

1. *Cassia fistula* (3hrs)
2. *Lawsonia inermis* (3hrs)
3. *Saraca asoka* (3hrs) **(9hrs)**

Module 7. Prospect of herbal technology:-

I. Plants as nutraceuticals (1hrs).

II. Under-utilized fruits: - 1. *Avarroha bilimbi, 2.Phyllanthus acidus* (3hrs).
.

III. Processing and preservation of seasonal fruits in Kerala:-
1. Mango, 2. Pineapple, 3. Jack fruit. (3hrs)

IV. Indigenous herbs used as vegetables:-
1. *Boerhavia diffusa,* 2. *Moringa oleifera,* 3. *Amaranthus viridis,*

4. *Amaranthus spinosa* (8hrs) **(15hrs)**

Paper 2. Floriculture -2 (90Hrs, 06 Credit)

Module 1. Soil and climate requirement (3hrs), water management and propagation techniques (8hrs) . **(11hrs)**

Module 2. Propagation technique by different methods:-
1. Seeds, 2. Stem 3. Root cuttings and 4. Underground stem.(10hrs)
Advantages and disadvantages (2hrs) **(12hrs)**

Module 3. Gardening and Harvesting (2hrs), marketing of commercially important flower crops (4hrs)
1. Rose, 2. Orchid, 3. Canna (6hrs) **(12hrs)**

Module 4. History and scope of Bonsai making (3hrs). Bonsai and art (3hrs), Classification of plants suitable for Bonsai (6hrs). **(12hrs)**

Module 5. Bonsai containers, Bonsai Making and important points for bonsai making (10hrs). Changing of pots / Containers (2hrs). **(12hrs)**

Module 6. Pruning of roots and stems in Bonsai technique (6hrs).
Trimming of plants:- Irrigation, Mannuring, protection from adverse Conditions (6hrs) **(12hrs)**

Module 7. Principles and types of flower arrangement (4hrs).
1. Western (3hrs) and 2.Japanese(3hrs) **(10 hrs)**

Module 8. Growth regulators (3hrs). Role and classification of growth regulators for ornamental crops (3hrs). Different methods for the use of growth regulators (3hrs) **(9hrs)**

Paper 3: Practical and field work (120Hrs, 08 Credits)

1. Botany, binomial, common name and morphology of useful parts of common medicinal plants used in Ayurvedic industries.
2. Preparation of a raw drug museum of major medicinal plants in Kerala.
3. Preparation of garden designs: - small and medium.
4. Identification and study of indoor plants.
5. Identification and description of shrubs.
6. Preparation of pot- mixtures for potting of medicinal/ ornamental plants.
7. Visiting famous botanic gardens in Kerala/ neighbouring state (any one).
8. Submit a field visit report.

ADVANCED DIPLOMA COURSE – THIRD YEAR

(300Hrs, 20 Credits)

Paper 1 Phytochemical application of crude drugs with special reference to Ayurveda (90hrs, 06 credits)

Module 1. Morphological evaluation of Raw Drugs from adulterants (detailed approach). **(10hrs)**

Module 2. Isolation techniques in plant secondary metabolites: -TLC/GC/HPLC. **(15hrs)**

Module 3. Utility of plant drugs as:-

1. Anti-oxidants (5hrs), 2. Anti-diabetic agents (5hrs),
3. Anti-cancer agents (5hrs). **(15hrs)**

Module 4. Prospects of medicinal plants in:-

1. Nanotechnology (10hrs), 2. Drug delivery (10hrs),
3. Chemotherapy (10hrs), 4. Phytoremediation (10hrs). **(40hrs)**

Module 5. Conservation and resource management of medicinal plants with special reference to RET- plants. **(10hrs)**

Paper -2 Floriculture -3 (90Hrs, 06 Credits)

Module 1. Gardening: -

1. History of gardening in India (5hrs).
2. Importance and scope of gardening (5hrs).
3. Various garden components and common plants used to make each components (10hrs).
4. Types of gardens (3hrs).
5. Preparation of garden designs (5hrs).
6. Famous garden in India (2hrs). **(30hrs)**

Module 2. Dry flower technology: -

1. Introduction (2hrs).
2. Advantages and uses of dried flowers (3hrs).
3. Techniques for the production of dry flowers (7hrs).
4. Selection of plant materials for dry flower arrangement (3hrs).
5. Drying plant materials (3hrs).
6. Methods of drying plant materials: Air drying, Press drying and Embedded drying (7hrs).
7. Preparation of plant materials for arrangement: Dyeing/colouring (3hrs).
8. Care of dried flowers (2hrs). **(30hrs)**

Module 3. Artificial flower arrangement: -

1. Types of materials used for making artificial flowers (3hrs).
2. Artificial flower making: Rose/Carnation/Marigold (6hrs).
3. Advantages of artificial flowers (4hrs).
4. Care of artificial flowers (2hrs). **(15hrs)**

Module 4. Value addition from dry/artificial materials: -

1. Dry/artificial flower arrangements (5hrs).
2. Potpourri making (3hrs).
3. Floral handicraft using pressed flowers and leaves: Cards/Collages (7hrs). **(15hrs)**

Paper 3. Practical (120Hrs, 08 Credits)

1. List out common raw drugs used for pharma products.
2. List out common plants used for making various garden components.
3. Dry flower arrangement using the collected dried plant materials.
4. Artificial flower arrangement using the handmade flowers.
5. Artificial flower arrangement using the handmade leaves.
6. Visit a well maintained Nanotechnology lab in Kerala/ neighbouring state (any one).
7. Submit a Lab visit report.

References:

1. **Arora J.S.** 2006. *Introductory Ornamental horticulture.* Kalyani Publications.
2. **Bhattacharjee S.K.** 2006. *Advances in Ornamental Horticulture.* Vols. I-VI.
3. **Bose T.K.** and Yadav L.P. 1989. *Commercial Flowers.* Naya Prokash.
4. **Chadha K.L.** and Chaudhury B. 1992. *Ornamental Horticulture in India.* ICAR.
5. **Lauria A.** and Ries V.H. 2001. *Floriculture – Fundamentals and Practices.* Agrobios. Pointer Publ.
6. **Rajeevan P.K**., Singh, K.P. and Valsalakumari P.K. 2003 *ed*. *Bulbous Ornamentals*
7. **Sabina G.T.** and Peter K.V. 2008. *Ornamental Plants for Gardens.* New India Publ Agency.
8. **Sheela V.L.** 2007. *Flowers in Trade.* New India Publ. Agency.
9. **Valsalakumari.** 2008. *Flowering Trees.* New India Publ. Agency. Woodrow M.G.1999. *Gardening in India.* Biotech Books.
10. **Valsalakumari P.K**., Rajeevan P.K., Sudhadevi P.K. and Geetha C.K. 2008. *Flowering Trees* New India Publ. Agency. Vol 1.The Back Ground. Springer, Netherlands.

Ad. diploma

2015-2018 Batch

DEPARTMENT OF BOTANY KOTTAYAM 686 001 CMS COLLEGE

Form B:

CAREER ORIENTED ADD-ON COURSES (Theory and Practical) (ADVANCED-DIPLOMA)

MARK SHEET

Name of the College: CMS COLLEGE, KOTTAYAM

Year: 2017– 2018

PAPER: 1 - MEDICINAL AND AROMATIC PLANTS - 3
PAPER: 2 - FLORICULTURE – 3
PAPER: 3- PRACTICALS AND FIELD WORK-3

Uni. Sl. No.	Reg. No.	Name of Candidate (s)	THEORY				PRACTICAL		Project / Report /Viva Voce: Max: 30 Marks	TOTAL: Max: 400 Marks	% of Marks	GRADE
			PAPER: 1 Max: 100 Marks		PAPER: 2 Max: 100 Marks		PAPER: 3 Max: 170 Marks					
			Continual Max: 50 Marks	Written Max: 50 Marks	Continual Max: 50 Marks	Written Max: 50 Marks	Continual Max: 10 Marks	Written Max: 160 Marks				
1	1001	ABHIJITH R. M SC/SR	-	-	-	-	07	133	26	166	42	NQ
2	1002	ABHIRAMI ASHOKAN. FOBC R	38	28	39	40	-	-	-	145	37	NQ
3	1003	ALEENA SAM. FOBC R	37	26	42	35	09	144	26	319	80	A
4	1004	AMRUTHA C S. FOBC R	36	25	42	35	04	115	25	282	71	B+
5	1005	ANJALI DEVARAJAN. FOBC R	38	28	37	26	07	126	27	289	73	B+
6	1006	ANUPAMA VIJAYAN. FOBC R	36	25	38	28	04	113	25	269	68	B
7	1007	ANUSHA A. FOBC R	38	28	37	26	07	136	27	299	75	B+
8	1008	ANUSREE MURALEEDHARAN. FOBC R	38	28	42	35	03	106	25	277	70	B+

Ad. Diploma. Course 2015-2018

9	1009	ASWATHY A. F OBC H	37	26	37	26	06	118	26	276	69	B	
10	1010	ATHIRA SUDHAN. F SC/ST R	-	-	-	-	-	-	-	-	-	Absent	-NQ
11	1011	G SREEDHAR. M OC H	-	-	-	-	-	-	-	-	-	Absent	-NQ
12	1012	JUBIN THOMAS. M OC R	36	25	43	36	09	144	29	322	81	A	
13	1013	MOSSES MATHEWS. M OEC R	38	28	36	25	06	119	24	276	69	B	
14	1014	NEESHMA T SABU. F SC/ST R	38	28	37	27	07	133	25	295	74	B+	
15	1015	R SREEHARI. M OC R	38	28	43	37	09	140	26	321	81	A	
16	1016	ROSEMARY SEBASTIAN. F OC R	40	31	43	36	06	119	26	301	76	B+	
17	1017	SACHIN K JOHN. M OEC R	36	25	41	34	04	110	26	276	69	B	
18	1018	SEENA SALIM. F OBC TC R	-	-	-	-	-	-	-	-	-	Absent	TC
19	1019	SUDHIN SURENDRAN. M OBC R	43	36	43	37	09	150	29	347	87	A	
20	1020	SURYAMOL SUNIL. F OBC H	38	28	37	27	06	125	25	286	72	B+	
21	1021	AMAL SATHEESAN. M SC/ST R	-	-	-	-	-	-	-	-	-	Absent	-NQ
22	1022	ANNIE WILSON. F OEC R	38	29	37	27	06	127	24	288	72	B+	
23	1023	ANU P THOMAS. F OC R	37	26	38	28	04	117	26	276	69	B	
24	1024	ARUN GOPAKUMAR. M OC R	37	27	40	30	07	138	25	304	76	B+	
25	1025	ARUN SAM THOMAS. M OEC R	-	-	-	-	-	-	-	-	-	Absent	-NQ
26	1026	ARYA K J. F OBC H	36	25	41	33	09	140	27	311	78	B+	
27	1027	ARYA K N. F SC/ST H	37	27	42	37	07	133	25	308	77	B+	
28	1028	ATHIRA MENON S. F OC R	36	25	41	34	06	119	26	287	72	B+	
29	1029	GEETHU SUSAN JAMES. F SC/ST/H	-	-	-	-	-	-	-	-	-	Absent	-NQ
30	1030	GOVIND S KUMAR. M OBC R	-	-	-	-	-	-	-	-	-	Absent	-NQ
31	1031	GREESHMA ANNA MANOJ. F OC H	37	26	45	40	09	142	28	327	82	A	
32	1032	KIRAN SIBI M OC R	-	-	-	-	-	-	-	-	-	Absent	-NQ
33	1033	MALAVIKA GOPAKUMAR. F OC R	40	30	46	41	07	136	29	329	83	A	
34	1034	MEEKHAL ABU. F OEC R	-	-	-	-	-	-	-	-	-	Absent	-NQ
35	1035	NEESHMA RACHEL LAL. F OEC R	38	29	41	34	07	135	25	309	78	B+	

36	1036	PRIYA PRASAD. F OBC R	37	27	38	28	04	116	28	278	70	B+
37	1037	SADIYA MARY PAUL. F OEC R	37	26	40	31	07	136	25	302	76	B+
38	1038	SHALINI M. F SC/ST R	44	38	37	26	04	112	26	287	72	B+
39	1039	SANDRAMOL SABU. F OEC R	36	25	40	31	04	111	25	272	68	B
40	1040	SARAYU P. F SC/ST R	37	26	37	26	04	113	25	268	67	B
41	1041	SETHU LEKSHMI M. (TC)	-	-	-	-	-	-	-	-	-	Absent
42	1042	SHILPAMOL SHIBU. O	-	-	-	-	-	-	-	-	-	Absent
43	1043	SOMITTA AUGUSTHY. F G R	38	29	42	35	07	137	27	315	79	B+
44	1044	VARSHA SOMARAJAN. F OBC R	36	25	46	42	04	107	25	285	72	B+
45	1045	VISHNU DAS M OBC U	36	25	37	26	06	118	28	276	69	B
46	-	-	-	-	-	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-	-	-	-	-	-
48	-	-	-	-	-	-	-	-	-	-	-	-
49	-	-	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-	-	-

TC
TC

B

46-
13
32

Dr. Hari N.

Name and Signature of the Co-ordinator

Co-ordinator
UGC Sponsored Add-on-course
Dept. of Botany
CMS College, Kottayam

CMS COLLEGE KOTTAYAM
(College Seal)

Name and Signature of Principal

PRINCIPAL
C.M.S COLLEGE KOTTAYAM

DEPARTMENT OF BOTANY
KOTTAYAM
686 001
CMS COLLEGE

Certificate

2017 - 2020 Batch.

Form B:

CAREER ORIENTED ADD-ON COURSES (Theory and Practical) (CERTIFICATE)

MARK SHEET

Name of the College: CMS COLLEGE, KOTTAYAM

Year: **2017 – 2018**

PAPER: 1 - MEDICINAL AND AROMATIC PLANTS - 1
PAPER: 2 - FLORICULTURE – 1
PAPER: 3- PRACTICALS AND FIELD WORK-1

Uni. Sl. No.	Reg. No.	Name of Candidate (s)	THEORY				PRACTICAL				Project Report (s) Max. 40 Marks	TOTAL Max. 400 Marks	% of Marks	GRADE
			PAPER: 1 Max. 100 Marks		PAPER: 2 Max. 100 Marks		PAPER: 3 Max. 80 Marks		PAPER: 4 Max. 80 Marks					
			Continual Max. 50 Marks	Written Max. 50 Marks	Continual Max. 50 Marks	Written Max. 50 Marks	Continual Max. 10 Marks	Written Max. 70 Marks	Continual Max. 10 Marks	Written Max. 70 Marks				
1	1085	ABHIDHA YOUSEF FOBC4	49	46	46	40	09	58	09	56	36	349	88	A
2	1086	ABHIRAMI S ANIL FOC4	42	31	44	37	07	49	08	51	27	296	74	B+
3	1087	ANAGHA THAMPI FSC/ST4	46	40	45	38	09	65	10	63	40	356	89	A
4	1088	ARJUN OMANAKUTTAN MGR	48	45	48	44	09	63	10	60	40	367	92	A+
5	1089	ASHNA M SHAJI FOBCR	45	39	46	40	08	53	09	55	34	329	83	A
6	1090	ATHILA AKBAR FOBC4	41	30	42	32	09	61	09	59	34	317	80	A
7	1091	ATHIRA PRASAD F SC/ST4	49	47	46	40	05	64	10	59	30	350	88	A

8	1092	ATHIRA RAVIKUMAR FOR-	43	33	46	40	07	48	09	56	34	316	79	B+
9	1093	ATHIRA S FOR X	42	31	42	32	-	-	-	-	-	-	-	NQ
10	1094	AYSHA BEEVI K S FOBCW	49	46	48	43	10	66	10	62	35	369	93	A+
11	1095	BINUJA B FOBCR-	48	44	46	41	09	62	10	61	38	359	90	A+
12	1096	DEVIKA M M FOR-	49	46	45	37	08	50	09	51	29	324	81	A
13	1097	FATHIMA YOONS FOBCR-	42	32	47	41	09	60	09	53	30	323	81	A
14	1098	GLADIS JOHN FOECW	42	31	45	40	06	36	09	54	37	300	75	B+
15	1099	GLORIS JOSEPH FOR-	48	43	46	38	08	54	10	60	40	347	87	A
16	1100	HARI K MSc/STW X	48	45	45	40	06	39	-	-	13-	-	-	NQ
17	1101	HELNA SARA JEBU FOR-	46	40	44	36	09	60	09	57	35	336	84	A
18	1102	JENEFA S J FOER-	47	41	44	36	08	50	09	55	26	316	79	B+
19	1103	K AGNES MARIA FOW	48	45	44	35	08	55	09	57	30	331	83	A
20	1104	KEERTHANA V FOR-	43	35	48	44	09	64	09	59	34	345	87	A
21	1105	AJAL THOMAS FOR-	49	46	49	47	07	49	08	42	27	324	81	A
22	1106	ANANDU ANILBABU MSc/STR-	49	46	48	44	08	56	08	50	32	341	86	A
23	1107	ANASWARA K ANIL FSc/STR-	45	39	47	45	09	61	10	61	38	355	89	A
24	1108	ANGEL AKKEENA JAMES FOECR-	45	39	44	35	07	44	09	52	25	300	75	B+
25	1109	ANJANA E S FOBCR-	50	48	49	46	10	68	10	62	40	383	96	A+
26	1110	DENNA SUSAN JACOB FOW	49	47	49	46	10	70	10	60	40	381	96	A+
27	1111	FEBAKUTTY VARGHESE FOR-	48	43	47	46	10	70	10	61	40	375	94	A+
28	1112	GREESHMA MADHU FSc/STR-	40	29	40	25	07	48	08	49	29	275	69	B
29	1113	HONEY MARIYA JOHN FOECR-	47	42	48	43	07	47	09	49	25	317	80	A
30	1114	JEENA JANIKUMAR FOBCR-	48	43	48	45	06	41	08	51	22	312	78	B+
31	1115	KELSEY ROSE CHRISTDAS FOBCR-	48	45	47	41	08	51	08	48	25	321	81	A

32	1116	KESIYAMOL JOSEPH F OEC R –	38	24	48	44	07	44	08	48	25	286	72	B+
33	1117	LAKSHMI AJITH F GN –	49	46	48	45	09	58	09	59	36	359	90	A+
34	1118	M SWATHIKRISHNA F GN –	47	42	49	46	09	65	10	59	38	365	92	A+
35	1119	NEJILA NOUSHAD F OBC R –	45	39	47	41	07	49	07	41	23	299	75	B+
36	1120	POOJA J F OBC H –	44	34	46	40	09	60	09	54	29	325	82	A
37	1121	REEMA MATHEW F OEC R –	46	43	45	39	08	51	09	53	29	323	81	A
38	1122	REMYA RAMESH M F SC/ST R –	42	28	44	37	09	61	09	53	35	318	80	A
39	1123	SNEHA M JOHNSON F GN R –	48	43	47	41	08	56	09	56	31	339	85	A
40	1124	SREELAKSHMI J PILLAI F GN –	48	43	47	42	09	64	09	55	39	356	89	A
41	1125	ANN MERIN REJI F GN R –	48	44	45	39	09	61	10	61	39	356	89	A
42	1126	GITTY MERIN GEORGE F GN R –	48	43	48	43	09	61	10	62	38	362	91	A+
43	1127	KIRAN BOSE P B M OBC H –	43	35	45	40	09	61	09	52	29	323	81	A
44	1128	RAHUL PRASAD M OBC R –	47	41	45	39	08	56	09	55	36	335	84	A
45	1129	REENLY PETER F GN R –	45	39	44	35	08	56	09	60	34	330	83	A
46	1130	SABIN BABU M SC/ST R –	45	38	47	41	07	47	08	51	33	317	80	A
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Dr. Hari. N

Co-ordinator
UGC Sponsored Add-on-course
Dept. of Botany
CMS College, Kottayam

Name and Signature of the Co-ordinator

(College Seal)

Name and Signature of Principal

PRINCIPAL
C.M.S COLLEGE KOTTAYAM

1

Diploma.

2016-2019 Batch.

Form B:

CAREER ORIENTED ADD-ON COURSES (Theory and Practical)

MARK SHEET-DIPLOMA

Name of the College: CMS COLLEGE, KOTTAYAM

Year: 2017 – 2018

PAPER: 1 - MEDICINAL AND AROMATIC PLANTS -2
PAPER: 2 - FLORICULTURE - 2
PAPER: 3& 4 - PRACTICALS AND FIELD WORK -2

Uni. Sl. No.	Reg. No.	Name of Candidate (s)	THEORY				PRACTICAL				Field visit/Record /Project / Report (s) Max. 30 Marks	Viva-Voce Max. 10 Marks	TOTAL Max. 400 Marks	% of Marks	GRADE
			PAPER: 1 Max: 100 Marks		PAPER: 2 Max: 100 Marks		PAPER: 3 Max: 80 Marks		PAPER: 4 Max: 80 Marks						
			Continual Max. 50 Marks	Written Max. 50 Marks	Continual Max. 50 Marks	Written Max. 50 Marks	Continual Max. 10 Marks	Written Max. 70 Marks	Continual Max. 10 Marks	Written Max. 70 Marks					
1	1046	AJITH V. A	41	28	31	15	09	50	09	59	26	10	278	70	B+
2	1047	AKSHAYA SHAJI	39	25	44	34	10	69	10	68	29	10	338	85	A
3	1048	ANJALI RAJENDRAN	40	27	38	21	10	68	10	59	26	10	309	78	B+
4	1049	ANJALY SUDHEESH	41	29	40	27	10	61	10	62	28	10	318	80	A
5	1050	ANJANA G BABU	44	34	43	31	10	57	10	61	29	10	329	82	A
6	1051	ANU PLACKANS	32	16	33	17	08	52	08	54	28	10	258	65	B

7	1052	ARCHANA G BABU	39	25	30	11	10	61	10	60	28	10	284	71	B+
8	1053	ASHLY BABU	44	35	47	41	10	70	10	66	29	10	362	91	A+
9	1054	ASHLY ELIZABETH P CHANDY	44	33	38	21	10	65	10	67	28	10	326	82	A
10	1055	ATHULYA V GOPAL	43	28	44	34	10	70	10	66	28	10	343	86	A
11	1056	AYANA REGHU	39	24	30	12	09	44	09	52	25	10	254	64	B
12	1057	GRACY THANKACHAN	38	21	31	15	07	45	07	44	25	09	242	61	B
13	1058	JITHIN T. A	40	27	33	16	08	55	08	55	28	09	279	70	B+
14	1059	JULIA SUSAN ISSAC	41	29	41	28	10	58	10	58	26	10	311	78	B+
15	1060	LIDIYA SUSAN FRANCIS	40	26	32	14	09	60	09	60	28	10	288	72	B+
16	1061	RAHUL DAS	42	30	35	18	08	50	09	50	26	10	278	70	B+
17	1062	SARATH P. S	38	21	37	20	07	37	07	42	25	10	244	61	B
18	1063	TEENA ANN REJI	39	23	32	13	10	61	10	58	28	10	284	71	B+
19	1064	ABIN J	39	23	30	12	08	54	08	49	25	10	258	65	B
20	1065	AKHIL S CHERICKAL	39	23	39	23	08	56	08	54	27	09	286	72	B+
21	1066	AKHILESH GEORGE	39	23	34	17	08	57	08	60	25	09	280	70	B+
22	1067	ALEESHA MATHEW	35	17	30	11	10	60	09	56	26	09	263	66	B
23	1068	ANJANA PRADEEP	36	19	30	12	08	55	09	61	28	10	268	67	B
24	1069	ARDRA SHAJAN	38	21	30	11	09	54	10	61	26	10	270	68	B
25	1070	CHARLES CHACKO	39	24	41	28	10	65	10	67	29	10	323	81	A
26	1071	CHINCHU SHAJI	43	31	46	38	10	66	10	66	27	10	347	87	A

27	1072	GANGA PRIYADERSAN	40	26	35	18	09	56	09	64	26	10	293	74	B+
28	1073	GEETHANJALY K. S	38	21	40	27	10	68	10	68	28	10	320	80	A
29	1074	GRACE MARIAM PHILIP	39	25	33	17	10	63	10	61	28	10	296	74	B+
30	1075	HASHMI P NAIR	40	27	38	22	10	70	10	64	28	10	319	80	A
31	1076	PHEBA LEELA GEORGE	39	23	37	20	10	58	10	60	26	10	293	74	B+
32	1077	PREETHU P JOHN	39	25	37	20	09	50	09	51	26	09	275	69	B
33	1078	REHANA SHAJU	39	24	31	15	09	55	10	64	28	10	285	72	B+
34	1079	RESHMA REMESH	40	27	35	19	10	60	10	59	26	10	296	74	B+
35	1080	REVEENA RAJAN	39	25	31	12	10	61	10	56	26	09	279	70	B+
36	1081	SAM JOSEPH SIMON	39	25	32	13	09	64	09	58	28	10	287	72	B+
37	1082	SREELAKSHMI R	41	29	35	19	10	61	10	63	29	10	307	77	B+
38	1083	SRUTHYMOL SURESH	39	23	35	19	07	37	08	50	25	09	252	63	B
39	1084	VARSHA VIJAYAN	35	19	32	13	10	59	10	60	25	10	273	69	B
40	-	-	-	-	-	-	-	-	-	-	-	-		-	-
41	-	-	-	-	-	-	-	-	-	-	-	-		-	-
42	-	-	-	-	-	-	-	-	-	-	-	-		-	-
43	-	-	-	-	-	-	-	-	-	-	-	-		-	-
44	-	-	-	-	-	-	-	-	-	-	-	-		-	-
45	-	-	-	-	-	-	-	-	-	-	-	-		-	-
46	-	-	-	-	-	-	-	-	-	-	-	-		-	-

ADD-ON COURSE IN BOTANY
(Career Oriented Programme)

Certificate/Diploma/Advanced Diploma Course

"Medicinal and Ornamental Plants"

Course duration : **Certificate Course: 01-year.**

: **Diploma: 01-year.**

: **Advanced Diploma: 01-year.**

Fee Structure : *1000/- per course/year.*

CERTIFICATE COURSE- FIRST YEAR		
Distribution of Papers	Hours	Credits
Theory: Paper 1- Medicinal and Aromatic Plants- 1	90 Hrs	06
Theory: Paper 2-Floriculture -1	90 Hrs	06
Paper 3. Practical and Field Work	120 Hrs	08
Total	300 Hrs	20
DIPLOMA COURSE- SECOND YEAR		
Distribution of Papers	Hours	Credits
Theory: Paper 1- Medicinal and Aromatic Plants- 2	90 Hrs	06
Theory: Paper 2-Floriculture- 2	90 Hrs	06
Paper 3. Practical and Field Work	120 Hrs	08
Total	300 Hrs	20

ADVANCED DIPLOMA COURSE- THIRD YEAR		
Distribution of Papers	Hours	Credits
Theory: Paper 1- Phytochemical application of crude drugs with special reference to Ayurveda.	90 Hrs	06
Theory: Paper 2- Floriculture- 3.	90 Hrs	06
Paper 3. Practical and Field Work.	120 Hrs	08
Total	300 Hrs	20

- Course offered: Mahatma Gandhi University, Kottayam with the affiliation of UGC.
- Centre : C M S College Kottayam, Kottayam, Kerala, India.
- Principal : Dr. Varghese C. Joshua.
- Co-ordinator : Dr. Hari N. [*Department of Botany*].

Course Dimensions :

Course offered by Mahatma Gandhi University, Kottayam with the affiliation of UGC to enrich the students with a better career guidance along with their regular degree courses. The add-on course will not affect the regular curriculum, as the time schedule is from 09.00 am to 09.45 am and on Saturdays 10.00 am to 01.00 pm.

The well defined syllabus makes up the students to achieve a Certificate Course after completing one academic year, if they are willing to continue in the second year a Diploma Course certificate in Medicinal and Ornamental Plants will be issued; on third year an Advanced Diploma Course certificate in Medicinal and Ornamental Plants will be issued.

General outcome of the course(s) :

- Help to promote the need of cultivation and conservation of Medicinal and Ornamental plants.
- Help to provide basic training in medicinal and ornamental plants in tune with the Ayurvedic and floriculture practices.
- Help to aware the students about the quality of Ayurvedic products and to generate Ayurveda-based self employment opportunities.

Innovative practices fulfilled by this course(s):

- Training on propagation techniques such as Cutting and other vegetative parts, Seeds, Layering, Budding and Grafting were given.
- Training on different types of Fresh and Dry-flower arrangements was given.
- Training on preparation of herbarium of common medicinal plants and dried specimens were given.
- Conduct visits to medicinal plant garden in Ayurvedic industry/Botanical gardens.

Course Certificate issued:

Reg.No:.....

CAREER ORIENTED ADD-ON PROGRAMME

Sponsored by

UNIVERSITY GRANTS COMMISSION

Approved by

MAHATMA GANDHI UNIVERSITY

Conducted by

CMS COLLEGE KOTTAYAM

The Career Orientation Council for the UGC Career - Oriented Programme of Add - On Course in Botany hereby makes known that Mr./Miss..... has been awarded *Certificate / Diploma / Advanced Diploma* in **MEDICINAL AND ORNAMENTAL PLANTS** Conducted by the Department of Botany C. M. S. College Kottayam, he/she having been certified by the duly appointed examiners to be qualified to receive the same and having been placed by them in Grade.....at the examination held in.....

DIRECTOR
College Development Council
Mahatma Gandhi University
Kottayam Kerala 686560
Date: ...../...../.....

PRINCIPAL

University Sl. No:.....