

SACRED HEART COLLEGE (AUTONOMOUS)

Department of Botany

BACHELOR OF SCIENCE

Course plan

Academic Year 2018-19

Semester 1

Programme Outcome

	Programme Outcome
PO 1	Critical Thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.
PO 2	Effective Communication: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the word by connecting people, ideas, books, media and technology.
PO 3	Effective Citizenship: Demonstrate empathetic social concern and equity centered national development, and the ability to act an informed awareness of issues and participate in civic life through volunteering.
PO 4	Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.
PO5	Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.
PO 6	Global Perspective: Understand the economic, social and ecological connections that link the world's nations and people.

B. Sc Botany

PROGRAM SPECIFIC OUTCOMES	
PSO1	Understand functional and theoretical concepts of the biological world and their relative role in the sustainability of natural habitats and biodiversity.
PSO2	Understand knowledge on the evolutionary relationships among the Plant.
PSO3	Understand the applications of plant biology in various disciplines.
PSO4	Perform laboratory procedures as per ethics and following standard Protocols.

COURSE PLAN

PROGRAMME	UG COMMON COURSE 1 B.Sc. Botany	SEMESTER	1
COURSE CODE AND TITLE	15U1CCENG 1: Communication Skills in English	CREDIT	4
HOURS/WEEK	5	HOURS/SEM	90
FACULTY NAME	Dr. Joseph Varghese		

	COURSE OUTCOMES	PS O	PO
CO 1	Understand the mechanics of English language and comprehend the meaning of simple narrations, announcements and instructions.	1,5	1, 2
CO 2	Make inferences about the implications of statements from stress and tone recognize the various registers of speech.	1,5	1, 2
CO 3	Listen to formal presentations and prepare lecture notes in the appropriate format.	1,3,5	1, 2, 3
CO 4	Use English for a variety of speaking contexts including conversations, presentations, speeches, discussions and negotiations.	1,3,5	1,2,3,4,5
CO 5	Critically evaluate presentations, narrations, speeches and analyse and evaluate their content and respond to them appropriately.	1,3,5	1,2,5
CO 6	Creatively respond to one's surroundings in the form of drama, poetry, narrations, and songs, and perform them before an audience.	1,3,5 ,6	1,2,3,4,5, 6

CO - PO/PSO Mapping										
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PSO 1	PSO 2	PSO 3	PSO 4
CO 1	3	2	0	0	0	0	3	2	1	0
CO 2	3	2	0	0	0	0	3	0	0	2
CO 3	1	3	1	0	0	0	3	2	2	1
CO 4	1	3	1	0	1	0	3	2	2	0
CO 5	1	3	1	1	2	1	3	1	0	2
CO 6	1	3	1	1	1	1	3	0	2	2

0. No mapping strength, 1. Low, 2. Medium, 3. High

COURSE PLAN

SESSI ON	TOPIC	Learning Resources	Activity	Course Outcome
MODULE I				
MODULE – I : Speech Sounds				
1	Introduction to Communication Skills	Course book	Lecture	CO 1
2	Phonemic symbols	Audio	Q & A	CO 1
3	Vowels	Audio	Q & A	CO 1
4	Consonants	Audio	Q & A	CO 1
5	Vowels	Audio	Q & A	CO 1
6	Consonants	Audio	Q & A	CO 1
7	Syllables	Course book	Exercises	CO 1
8	Syllables	Audio	Q & A	CO 1
9	Syllables	Audio	Q & A	CO 1
10	Word stress	Audio	Q & A	CO 1

11	Word stress	Course book	Exercises	CO 1,2
12	Word stress	Course book	Exercises	CO 1,2
13	Word stress	Audio	Q & A	CO 1
14	Stress in polysyllabic words	Audio	Q & A	CO 1
15	Stress in polysyllabic words	Course book	Exercises	CO 1, 2
16	Stress in polysyllabic words	Course book	Exercises	CO 1, 2
17	Stress in words used as different parts of speech	Audio	Q & A	CO 1
18	Stress in words used as different parts of speech	Audio	Q & A	CO 1
19	Stress in words used as different parts of speech	Lecture		CO 1, 2
MODULE II : Listening				
20	Sentence stress	Course Book	Lecture	CO 2
21	Sentence stress	Audio	Q& A	CO 2
22	Sentence stress	Audio	Q& A	CO 2
23	Sentence stress	Lecture	Exercises	CO 2
24	Weak forms and strong forms	Audio	Q & A	CO 2
25	Weak forms and strong forms	Audio & Lecture	Exercises	CO 2
26	Weak forms and strong forms	Lecture	Exercises	CO 2
27	Intonation	Lecture	Exercises	CO 2
28	Intonation	Audio	Q & A	CO2
Internal Assessment Test 1				
30	Awareness of different accents	Video	Q & A	CO 2
31	Awareness of different accents	Audio/Video	Q & A	
32	Awareness of different accents	Audio/Video	Q & A	CO 2
MODULE- III: Speaking				
33	American English	Course Book	Lecture	CO 2,3

34	American English	Audio	Discussion	CO 2,3
35	American English	Audio	Discussion	CO 2,3
36	American English	Audio	Exercises	CO 2,3
37	British and Indian English	Course Book	Discussion	CO 2,3
38	British and Indian English	Audio	Discussion	CO 2,3
39	British and Indian English	Audio	Discussion	CO 2,3
40	British and Indian English	Audio	Discussion	CO 2,3
Unit II: Academic Listening & Note-taking				
41	Influence of the mother tongue	Course Book	Lecture	CO 3
42	Influence of the mother tongue	Course book	Exercises	CO 3
43	Influence of the mother tongue	Audio	Exercises	CO 3
44	Influence of the mother tongue	Audio	Exercises	CO 2,3
45	Active listening	Audio	Exercises	CO 2,3
46	Active listening	Audio	Exercises	CO 2,3
47	Barriers to listening	Audio	Exercises	CO 2,3
48	Barriers to listening	Audio	Exercises	CO 2,3
MODULE III				
Unit 1 – Art of Small Talk				
49	Seminar Presentation	Course book	Lecture	CO 1,2,4
50	Listening and note taking	Course book	Exercises	CO 1,2,4
51	Listening and note taking	Audio	Q & A	CO 1,2,4
52	Listening and note taking	Course book	Q & A	CO 4
53	Listening and note taking	Course book	Exercises	CO 4
54	Listening to announcements	Audio	Exercises	CO 4
55	Listening to announcements	Course book	Exercises	CO 4
56	Listening to announcements	Course book	Exercises	CO 1,2,4

57	Listening to announcements	Course book	Exercises	CO 4
Unit II: Transactional Conversation				
59	Listening to news on the radio and television	Course book	Exercises	CO 1,2,4
60	Listening to news on the radio and television	Course book	Exercises	CO 1,2,4
61	Listening to news on the radio and television	Course book	Exercises	CO 1,2,4
62	Word stress and rhythm	Course book	Exercises	CO 1,2,4
63	Word stress and rhythm	Course book	Exercises	CO 1,2,4
64	Pauses and sense groups	Course book	Exercises	CO 1,2,4
65	Pauses and sense groups	Course book	Exercises	CO 1,2,4
66	Pauses and sense groups	Course book	Exercises	CO 1,2,4
67	Falling and rising tones	Course book	Exercises	CO 1,2,4
68	Falling and rising tones	Course book	Exercises	CO 1,2,4
69	Falling and rising tones	Course book	Exercises	CO 1,2,4
Unit III: Telephone Conversation				
70	Fluency and pace of delivery	Course book	Lecture	CO 4
71	Internal Examination	Course book	Exercises	CO 4
72	Art of small talk	Course book	Exercises	CO 1,2,4
Internal Assessment 2				
MODULE IV				
Unit 1: Presentation				
73	Participating in conversations	Course book	Lecture	CO 4 & 6
74	Participating in conversations	Discussion	Exercises	CO 4 & 6
75	Participating in conversations	Course book	Lecture	CO 4 & 6
76	Making a short formal speech	Course book	Discussion	CO 4 & 6
77	Participating in conversations	Course book	Discussion	CO 4 & 6
78	Describing people	Course book	Discussion	CO 4 & 6

79	Describing people	Course book	Discussion	CO 4 & 6
80	Place, events and things	Course book	Lecture	CO 4 & 6
81	Group discussion skills and telephone skills	Course book	Discussion	CO 4 & 6
82	Reading: theory and Practice -----	Course book	Discussion	CO 4 & 6
83	Scanning - Surveying a textbook using an index	Course book	Discussion	CO 4 & 6
84	Reading with a purpose – making predictions	Course book	Discussion	CO 4 & 6
MODULE – IV: Reading				
85	Understanding text structure	Course book	Lecture	CO 4 & 6
86	Locating main points – Making inferences	Course book	performance	CO 4 & 6
87	Reading graphics	Course book	performance	CO 4 & 6
88	Reading critically	Course book	performance	CO 4 & 6
89	Reading for research	Course book	performance	CO 4 & 6
90	Reading for research			

INDIVIDUAL ASSIGNMENTS/SEMINAR – Details & Guidelines

	Date of completion	Topic of Assignment & Nature of assignment (Individual/Group – Written/Presentation – Graded or Non-graded etc.)	Course Outcome
1	4/8/2018	Presentations	CO 2
2	28/8/2018	Role plays	CO 3

GROUP ASSIGNMENTS/ACTIVITIES – Details & Guidelines

	Date of completion	Topic of Assignment & Nature of assignment (Individual/Group – Written/ Presentation – Graded or Non-graded etc)	Course Outcome
1	12/9/2018	Group Discussions	CO 1,2,4,5
2	20/9/2018	Performances	CO 1,2,,4,5

References

V.Sasikumar, P Kiranmai Dutt and Geetha Rajeevan, . Communication Skills in English. Cambridge University Press and Mahatma Gandhi University.

COURSE PLAN

PROGRAMME	B.Sc. Botany	SEMESTER	1
COURSE CODE AND TITLE	15U1CCENG02: Reading Literature in English	CREDIT	3
=HOURS/WEEK	4	HOURS/SEM	72
FACULTY NAME	Sabu Thomas		

COURSE OUTCOMES

	COURSE OUTCOMES	PO/ PSO	CL
CO1:	Explain the nuances of English Language through literature.	PO2,	A
CO2:	Compare the Varied parameters of English language.	PO1, PO2	An
CO3:	Discover comprehensive ability.	PO1 PSO 2	U
CO4:	Connect the efficiency of the students with realities of life.	PO1 PSO 3	A
CO5:	Evaluate the beauty of literary expression.	PO2	E

CL* Cognitive Level

R-Remember

U- Understand

A- Apply

An- Analyze

E- Evaluate

Cr- Create

CO -PO/PSO Mapping

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PSO 1	PSO 2	PSO 3	PSO 4
CO 1		3					0	0	1	0
CO 2	3	2					0	0	1	0
CO 3	3						0	2	1	0
CO 4	2						0	0	3	0
CO 5		2					0	0	0	0

Mapping Strength

- 0. No Mapping strength
- 1- Low
- 2- Medium
- 3- High

COURSE PLAN

SESSION	TOPIC	Learning Resources	VALUE ADDITIONS	Course Outcome
MODULE I				
ESSAYS				
1	Introducing the text book	Text	PPT	CO3
2	Bores: E V Lucas	Text		CO3
3	Bores: E V Lucas	Text		CO2
4	Bores: E V Lucas	Text		CO1
5	A Glory has Departed- Jawaharlal Nehru	Text	Group Discussion	CO2
6	A Glory has Departed- Jawaharlal Nehru	Text		CO4
7	A Glory has Departed- Jawaharlal Nehru	Text		CO3

8	A Glory has Departed- Jawaharlal Nehru	Text		CO1
9	Tryst with Destiny- Amartya Sen	Text		CO3
10	Tryst with Destiny- Amartya Sen	Text		CO5
11	Tryst with Destiny- Amartya Sen	Text		CO3
12	Tryst with Destiny- Amartya Sen	Text		CO1
13	How to Escape from Intellectual Rubbish-Bertrand Russel	Text	Group Discussion	CO3
14	How to Escape from Intellectual Rubbish-Bertrand Russel	Text		CO5
15	How to Escape from Intellectual Rubbish-Bertrand Russel	Text		CO3
16	How to Escape from Intellectual Rubbish-Bertrand Russel	Text		CO4
17	Discussion			CO6
18	Discussion		Quiz	CO3
MODULE II- Poetry				
19	Sonnet XXX-William Shakespeare	Text	Lecture/PPT	CO3
20	Sonnet XXX-William Shakespeare	Text		CO2
21	Sonnet XXX-William Shakespeare	Text	Poetry Recitation	CO1
22	Ode to a Nightingale-John Keats	Text	Poetry Recitation	CO4
23	Ode to a Nightingale-John Keats	Text		CO5
24	Mending Wall- Robert Frost		Interaction	CO6
First Internal Examination				
25	Mending Wall- Robert Frost	Text	Poetry Recitation	CO3
26	Mending Wall- Robert Frost	Text	Role Play	CO1
27	The Bicycle- David Malouf	Text	Role play	CO4
28	The Bicycle- David Malouf	Text		CO 5

29	The Bicycle- David Malouf	Text		CO5
30	The Refuge	Text		CO 4
Unit 3: The Boy Comes Home				
30	Poor Girl- Maya Angelou	Text	Lecture/PPT	CO3
31	Poor Girl- Maya Angelou	Text		CO2
32	The Mask- Kamala Suraiya	Text		CO1
33	The Mask- Kamala Suraiya	Text		CO2
34	Goodbye party for Miss Pushpa T S- Nissim Ezekiel	Text	Poetry Recitation	CO4
35	Goodbye party for Miss Pushpa T S- Nissim Ezekiel	Text		CO5
36	Once Upon a Time-Gabriel Okara	text	Quiz	CO5
MODULE III: Short Story				
37	The Lottery Ticket- Anton Pavlovich Chekhov	Text		CO 3
38	The Lottery Ticket- Anton Pavlovich Chekhov	Text		CO 3
39	The Lottery Ticket- Anton Pavlovich Chekhov	Text		CO 4
40	The Lottery Ticket- Anton Pavlovich Chekhov	Text	Quiz	CO 5
41	The Lottery Ticket- Anton Pavlovich Chekhov	Text	Video/ e-content	CO 3
42	Retrieved Reformation- O. Henry	Text		CO 4
43	Retrieved Reformation- O. Henry	Text		CO 5
44	Retrieved Reformation- O. Henry	Text		CO 2
MODULE III: Short Story				
45	Retrieved Reformation- O. Henry	Text	PPT	CO 3
46	Retrieved Reformation- O. Henry	Text		CO1

47	A Shadow- R K Narayan	Text		CO 2
48	A Shadow- R K Narayan	Text		CO 5
49	A Shadow- R K Narayan	Text		CO 5
50	A Shadow- R K Narayan	Text	PPT	CO3
51	A Devoted Son- Anita Deasi	Text		CO 5
52	A Devoted Son- Anita Deasi	Text		CO2
53	A Devoted Son- Anita Deasi	Text		CO4
54	A Devoted Son- Anita Deasi	Text	Discussion/Quiz	CO6
55	Two Gentlemen of Verona- A J Cronin	Text		CO3
56	Two Gentlemen of Verona- A J Cronin	Text		CO 5
57	Two Gentlemen of Verona- A J Cronin	Text		CO3
58	Two Gentlemen of Verona- A J Cronin	Text	Quiz	CO 5
59	Two Gentlemen of Verona- A J Cronin	Text	Role Play	CO3
60	Two Gentlemen of Verona- A J Cronin	Text		CO 5
Unit 4: DRAMA				
61	Refund- Fritz Karinthy	Text		CO3
62	Refund- Fritz Karinthy	Text		CO 5
63	Refund- Fritz Karinthy	Text		CO3
64	Refund- Fritz Karinthy	Text	Enacting the Drama	CO 5
65	Lord Byron's Love Letter-Tennessee Williams	Text		CO3
66	Lord Byron's Love Letter-Tennessee Williams	Text	Quiz	CO 5
Second Internal Examination				
67	Lord Byron's Love Letter-Tennessee Williams	Text		CO3

68	Lord Byron's Love Letter-Tennessee Williams	Text	Enacting the Drama	CO 5
69	The Monkey's Paw- W.W Jacob	Text Recital/ lecture		CO3
70	The Monkey's Paw- W.W Jacob	Text		CO 5
71	The Monkey's Paw- W.W Jacob	Text		CO 3
72	The Monkey's Paw- W.W Jacob	Text	Enacting the Drama	CO 5

References

Reading Literature in English: MG University

COURSE PLAN

PROGRAMME	BACHELOR OF SCIENCE – BOTANY	SEMESTER	1
COURSE CODE AND TITLE	15U1CCHIN1A – PROSE AND DRAMA	CREDIT	4
HOURS/WEEK	4	HOURS/SEM	72
FACULTY NAME	Dr. MINIPRIYA R, SYAMLAL M. S		

	COURSE OUTCOMES	PO/ PSO	CL
CO 1	Understand and explain the different prose forms written in Hindi language.	PO1, PO2, PO6	U
CO 2	Understand various trends in Hindi Drama and its presentation.	PO1, PO2, PO5, PSO 3	A
CO 3	Understand the ancient Indian culture	PO1, PO2, PO5, PO6, PSO3	An
CO 4	Understand the socio - cultural change in literature	PO1, PO3, PO6, PSO 1	U
CO 5	Understand the development of literature and aesthetics	PO1, PO3, PO4, PO5, PO6, PSO 3	An

CL* Cognitive Level

R- Remember

U- Understand

A- Apply

An- Analyze

E- Evaluate

Cr- Create

CO - PO/PSO Mapping

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PSO 1	PSO 2	PSO 3	PSO 4
CO 1	2	2				2				
CO 2	2	2			2				1	
CO 3	2	2			2	1			1	
CO 4	2		2			2	1			
CO 5	2		2	2	2	2			1	

Mapping Strength

- 0- No Mapping strength
- 1- Low
- 2- Medium
- 3- High

SESSION	TOPIC	LEARNING RESOURCES	VALUE ADDITIONS	COURSE OUTCOME
MODULE I				
1	General information about literature	Lecture/Discussion		CO 4, CO 5
2	Development of Drama	Lecture/Discussion		CO 1, CO 2
3	Madhavi – Introduction of Author Bhishma Sahni	Lecture/PPT		CO 2, CO 5
4	Madhavi Act – 1, Scene -1	Lecture	Video	CO 2
5	Essay - Jeevan Mein Sahitya Ka Sthan Introduction of Author Premchand	Lecture/Discussion		CO 1, CO 4
6	Premchand and his literary works	Lecture/PPT		CO 5
7	Madhavi Act – 1, Scene -1	Lecture	Narration of stories related to 'Mahabharat'	CO 2
8	Revision	Interaction	Video	CO1, CO 4
9	Madhavi Act – 1, Scene -1	Lecture		CO 2
10	Madhavi Act – 1, Scene -2	Lecture/Discussion		CO 2
11	Essay - Jeevan Mein Sahitya Ka Sthan	Lecture	Seminar	CO 1, CO 4
12	Revision	Interaction	Presentation by students	CO 1, CO4
13	Madhavi Act – 1, Scene -2	Lecture		CO 2
14	Madhavi Act – 1, Scene -2	Lecture		CO 2
15	Madhavi Act – 1, Scene -3	Lecture	Presentation by students	CO 2
16	Essay - Jeevan Mein Sahitya Ka Sthan	Interaction	Acting	CO 1, CO 4
17	Analyzing the characters of 'Madhavi'	Interaction	Conversation	CO 2,CO 3, CO 4
18	Essay - Jeevan Mein Sahitya Ka Sthan	Lecture		CO 1, CO 4
19	Madhavi Act – 1, Scene -3	Lecture/Discussion	Video	CO 2
20	Essay - Jeevan Mein Sahitya Ka Sthan	Lecture		CO 1, CO 4
21	Essay - Jeevan Mein Sahitya Ka Sthan	Interaction		CO 1, CO 4

22	Essay - Jeevan Mein Sahitya Ka Sthan	Lecture/Discussion	Seminar	CO 1, CO 4
23	Essay - Sahitya Ki Mahatta Introduction of Author Mahaveer Prasad Dwivedi	Lecture/PPT		CO 1, CO 5
24	CIA – I (1Hour Exam)			
MODULE II				
25	Essay - Sahitya Ki Mahatta	Lecture		CO 1, CO 4
26	Essay - Sahitya Ki Mahatta	Lecture		CO 1, CO 4
27	Essay - Sahitya Ki Mahatta	Lecture		CO 1, CO 4
28	Essay - Sahitya Ki Mahatta	Lecture/Discussion		CO 1, CO 4
29	Revision	Interaction	Seminar	CO 1, CO 4
30	Madhavi Act – 2, Scene -1	Lecture		CO 2
31	Madhavi Act – 2, Scene -1	Lecture	Presentation by students	CO 2, CO 4
32	Madhavi Act – 2, Scene -1	Lecture/Discussion		CO 2
33	Madhavi Act – 2, Scene -2	Lecture		CO 2
34	Madhavi Act – 2, Scene -2	Lecture		CO 2
35	Madhavi Act – 2, Scene -2	Lecture	Presentation by students	CO 2, CO 4
36	Revision	Interaction	Video	CO 2, CO 4
37	Madhavi Act – 2, Scene -3	Lecture		CO 2, CO 4
38	Madhavi Act – 2, Scene -3	Lecture/Discussion		CO 2
39	Essay - Lalit Kalayen Introduction of the Author Dr. Syamsundar Das	Lecture/PPT		CO 1, CO 4
40	Essay - Lalit Kalayen	Lecture		CO 1, CO 4
41	Essay - Lalit Kalayen	Lecture		CO 1, CO 3
42	Essay - Lalit Kalayen	Lecture/Discussion	Seminar	CO 1, CO 3 CO 4
43	Essay - Lalit Kalayen	Lecture/Discussion		CO 1, CO 4
44	Madhavi Act – 2, Scene -3	Lecture	Video	CO 3
45	Madhavi Act – 2, Scene -3	Lecture	Video	CO 4
46	Interactive session	Discussion	Debate	CO1, CO4 , CO 5
47	CIA – II (2 Hours Exam)			
MODULE III				
48	Essay - Rashtra Ka Swaroop Introduction of the Author Vasudev Saran Agraval	Lecture/PPT		CO 1 , CO 5
49	Essay - Rashtra Ka Swaroop	Lecture		CO 1, CO 4
50	Essay - Rashtra Ka Swaroop	Lecture		CO 1, CO 4
51	Essay - Rashtra Ka Swaroop	Discussion	Presentation by students	CO 1, CO 4
52	Madhavi Act – 2, Scene -4	Lecture		CO 2
53	Madhavi Act – 2, Scene -4	Lecture		CO 2
54	Madhavi Act – 3, Scene -1	Lecture		CO 2, CO 4

55	Madhavi Act – 3, Scene -1	Lecture/Discussion		CO 2, CO 4
56	Revision	Discussion	Video	CO 2, CO 4
57	Essay - Tum Ghar Kab Aoge Kavi Introduction of the Author Ramdhari Sinh Dinakar	Lecture/PPT		CO 1, CO 5
58	Essay - Tum Ghar Kab Aoge Kavi	Lecture		CO 1
59	Essay - Tum Ghar Kab Aoge Kavi	Lecture		CO 1
60	Essay - Tum Ghar Kab Aoge Kavi	Lecture	Seminar	CO 1
61	Essay - Tum Ghar Kab Aoge Kavi	Lecture/Discussion		CO 1, CO 4
62	Essay - Tum Ghar Kab Aoge Kavi	Discussion	Presentation by students	CO 1, CO 4
63	Madhavi Act – 3, Scene -2	Lecture		CO 2,CO 4 CO 5
64	Madhavi Act – 3, Scene -2	Lecture		CO 2
s65	Madhavi Act – 3, Scene -2	Lecture/Discussion	Video	CO 2, CO 5
66	Madhavi Act – 3, Scene -3	Lecture	Video	CO 2
67	Madhavi Act – 3, Scene -3	Lecture/Discussion	Presentation by students	CO 2, CO 4
68	Madhavi Act – 3, Scene -3			CO2, CO 4
69	Madhavi Conclusion	Interaction	Criticising the drama	CO 2, CO 3
70	Seminar			CO 1, CO 5
71	Seminar			CO 1, CO 5
72	Evaluation of the course			CO 1, CO 2, CO 3, CO4, CO 5

INDIVIDUAL ASSIGNMENTS/SEMINAR – Details & Guidelines (B.Sc. BOTANY)

SL NO	Date of completion	Topic of Assignment & Nature of assignment (Individual/Group – Written/Presentation – Graded or Non-graded etc)	Course Outcome
1	Assignment (October)	Review of a lesson based on the text book 2 and reference-Writing (Individual)	CO 2, CO 4
2	Seminar (October)	Presentation on a given topic based on t the text book 1 and reference – oral (Individual)	CO 1, CO 3

GROUP ASSIGNMENTS/ACTIVITES – Details & Guidelines

SL NO	Date of completion	Topic of Assignment & Nature of assignment (Individual/Group – Written/Presentation – Graded or Non-graded etc)	Course Outcome
1	September	Literary Analysis of drama and its video (Group Discussion)	CO 2
2	September	Presentation of any scene from drama Madhavi.(Group Activity)	CO 2

References

- **Hindi Natak Ka Ithihas : Somanath Gupth Hindi Bhavan, Allahabad**
- **Yug- Chaya , Editor: Shivdan Singh Chouhan, Rajkamal Prakashan,New Delhi.**

Web resource references:

- epustakalay.com
- www.hindikunj.com

COURSE PLAN

PROGRAMME	BOTANY	SEMESTER	1
COURSE CODE AND TITLE	15U1CCFRN1A - FRENCH LANGUAGE AND COMMUNICATION SKILLS I	CREDIT	4
HOURS/WEEK	4	HOURS/SEM	72

	COURSE OUTCOMES	PO/ PSO	CL
CO 1	Understand the basic concepts of French language including grammar, vocabulary and sentence structure	PO1,PO2, PO6, PSO3	U
CO 2	Understand the basic communication skills necessary for living in France and French speaking countries.	PO1, PO5,PO6, PO2,PSO3	U
CO 3	Describe oneself and ones surroundings using a repertory of words and expressions in a simple and structured grammatical manner.	PO1, PO4, PO6,PSO3	A
CO 4	Develop business communication skills	PO2, PO4,PO5, PO6,PSO3	A
CO 5	Express an issue of concern including topics like environmental, social or health issues, enumerate its causes and consequences and suggest solutions	PO1,PO2,PO3,PO5,PO6,PSO3	A
CO 6	Understand the mannerisms, culture and tradition of France and Francophone countries and compare it to one's own country and develop co-cultural feeling	PO6,PO2,PSO3	U
CO 7	Understand and appreciate the history of France and Francophone countries and compare it to one's own country	PO2,PO6,PSO3	U
CO 8	Understand the special features of France including gastronomy, social institutions, policis, the present French scenario and compare it to one's own country	PO1,PO2,PO5,PO6,PSO3	U

CL* Cognitive Level

R- Remember

U- Understand

B- Apply

An- Analyze

E- Evaluate

Cr- Create

CO - PO/PSO Mapping

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PSO 1	PSO 2	PSO 3	PSO 4
CO 1	2	2				2			2	
CO 2	2	2			2	2			2	
CO 3	2			2		2			2	
CO 4		2		2	2	2			2	
CO 5	2	2	2		2	2			2	
CO6		2				2			2	
CO7		2				2			2	
CO8	2	2			2	2			2	

Mapping Strength

0. No Mapping strength
1. Low
2. Medium
3. High

Session	Topic	Method of Teaching	Value Additions	CO
MODULE I				
1	Introducing French Basics	role play, Discussion	french basic communication	1,2,3
2	French basics -alphabets	chalk n talk, audio	Lecture	1,2,3
3	french basics	audio ppt, discussion	Lecture	1,2,3
4	french basics	chalk n talk	Lecture	1,2,3
5	numbers 1-20	role play,audio ppt	Lecture	1,2,3
6	verbs introduction	chalk n talk	Lecture	1,2,3
7	conjugation introduction	chalk n talk,ppt audio	audio	1,2,5
8	Greetings	role play,audio ppt	Know a new culture	1,2,6
9	Basic useful sentences in French	role play, audio ppt	Q and A	1,2,3
10	spell in French	role play,audio ppt	presentation	1,2,
11	Indefinite articles	chalk n talk,audio ppt	Lecture	1,2
12	prononciation of vowels	role play,audio ppt	Lecture	1,2
13	French culture	Discussion, audio,ICT	Lecture,q nd A	6,7,8
14	Revision			
MODULE II				
15	introducing a third person	game,audio ppt	Q nd A	2,3
16	Asking personal information in french	role play,audio ppt	Lecture	2,3
17	Giving personal information in french	role play,audio ppt	Interaction	2,3
18	verbs etre ,avoir	chalk n talk	Lecture	2,3
19	ER verbs	chalk n talk, audio ppt	Lecture	2,3
20	adjectives of nationalities	role play, conversation	Lecture	2,3
21	grammar articles	role play, listening	Ppt	2,3
22	CIA 1			2,3
23	Profession	cross words,chalk n talk	Lecture	2,3

24	interests and tastes	role play,audio	Lecture	2,3,4
25	Masculine,feminine of adjectives	exercices ,chalk n talk,audio	Lecture	1,2,4,5
26	French culture- french names and profession	roleplay,audio	knowing culture	5,6,7,8
27	explaining the objective of learning French	Discussion, ICT,audio	Lecture,q and A	5,6,7,8
28	Revision			
		MODULE III		
29	describe a locality	oral, description	Q and A	2,3,
30	Express in quacity	role play,chalk n talk	Lecture	2,3
31	"vivre" verb conjugation	audio,chalk n talk	Lecture	2,3
32	places vocabulary	games,music,audio	Video	2,3,5
33	Il y a,	audio,	daily needed vocabs	2,3
	il n'y a pas	chalk n talk		
34	definite articles	chalk n talk,audio ppt	Lecture	2,3
35	Adjectives	role play,audio ppt	Lecture	2,3
36	Prepositions	role play ,audio ppt	Lecture	2,3,4
37	Negation	chalk n talk/roleplay	Lecture	2,3
38	Qualificative adjectives	chalk n talk ,audio ppt	Q and A	2,3
39	Describing ur ideal locality	role play/presentation	Lecture	2,3
40	intonations	audio ppt	Lecture	1,2,3
41	French culture-express preference for city or village	Discussion	knowing culture	5,6,7,8
42	revision			
43	CIA 2			
44	Correspondig with a friend expressing one's likings	chalk n talk/Role plays	Q and A	2,3
45	speak about a persons character	role play ,GD	know each other	5,6,7
46	adjectif possessif part 1	chalk n talk,audio ppt	Lecture	1,2,3
47	adjectif possessif part 2	chalk n talk, audio ppt	Lecture	2,4,5
48	speak about the surroundings	discussion	Lecture	2,3
49	introduce and describe someone	role play	Lecture	2,3,4
50	activities - vocabulary	lecture,audio	Lecture	1,2,5
51	sports vocabulary	speaking/role play	general knowledge	1,2,3

52	Vocabulary - relations	chalk n talk,audio ppt	Lecture	2,5,6
53	famous french personality	discussion/comprehension	Lecture	5,6,7,8
54	lexique des liens de parente	chalk n talk,audio ppt	Lecture	2,3,4
	Express ones likings	Audio ppt,discussion	Q and A	2,3
55	lexiques des loisirs	Audio ppt,discussion	Video	2,3
56	forme negation	Audio ppt,discussion	Q and A	2,3
57	pronunciation of verbs	Audio ppt,discussion	Q and A	2,3
58	form filling	Audio ppt,discussion	Q and A	2,3
59	french artists	Audio ppt,discussion	GK	2,3
60	french music	Audio ppt,discussion	Video	2,3
61	one's own musical preferences	Audio ppt,discussion	Q and A	
62	french music and comparison to one's own musical preference	discussion	knowing the culture	5,6,7,8
63	module 1 -revision			
64	module 1 -revision			
65	module 2- revision			
66	module 2-revision			
67	module 3-revision			
68	module 3-revision			
69	module 4-revision			
70	module 4-revision			
71	PYQs discussion			
72	PYQs discussion			

INDIVIDUAL ASSIGNMENTS/SEMINAR – Details & Guidelines

	Date of completion	Topic of Assignment & Nature of assignment (Individual/Group – Written/Presentation – Graded or Non-graded etc)	Course Outcome
1	By October	Basic vocabulary on communication skills in Malayalam and French	CO 2,3,6,8
2		roleplays	CO 123456

References

Version Originale, site web

COURSE PLAN

PROGRAMME	BACHELOR OF SCIENCE,BOTONY	SEMESTER	1
COURSE CODE AND TITLE	15U1CCSAN1A: DRAMA,POETRYAND ALANKARA	CREDIT	4
HOURS/WEEK	4	HOURS/SEM	72
FACULTY NAME	Dr.VIJAYARAJAN K.U		

	COURSE OUTCOMES	PO/ PSO	CL
CO 1	Students can understand the poetic style with special reference to classical literature	PO1,PO2, PO6, PSO2	U
CO 2	Students get an awareness about Indian classical poetic tradition	PO1, PO5,PO6,PO2,PSO2	U
CO 3	Students familiarize the figures of speech and their usage	PO1, PO4, PO6,PSO2	A
CO 4	Students get an awareness about ascthetic values	PO2, PO4,PO5, PO6,PSO2	A
CO 5	Express an issue of concern including topics like environmental, social or health issues, enumerate its causes and consequences and suggest solutions	PO1,PO2,PO3,PO5,PO6,PSO2	A
CO 6	Understand moral values through Drama	PO6,PO2,PSO2	U
CO 7	Understand the tools to beutify the literature through Alankara	PO2,PO6,PSO2	U
CO 8	Students identify the richness of Indian Literature	PO1,PO2,PO5,PO6,PSO2	U

CL* Cognitive Level

R- Remember

U- Understand

A- Apply

An- Analyze

E- Evaluate

Cr- Create

CO -PO/PSO Mapping

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PSO 1	PSO 2	PSO 3	PSO 4
CO 1	2	2				2		1		
CO 2	2	2			2	2		1		
CO 3	2			2		2		1		
CO 4		2		2	2	2		1	2	
CO 5	2	2	2		2	2		1		
CO6		2				2		1		
									1	
CO7		2				2		1		
CO8	2	2			2	2		1	2	

Mapping Strength

- 0. No Mapping strength
- 1- Low
- 2- Medium
- 3- High

SESSI ON	TOPIC	LEARNING RESOURCES	VALUE ADDITIONS	COURSE OUTCOME
MODULE I				
1	Introducing Sanskrit Basics	Lecture		CO 1
2	About Mahakavya	Lecture		CO 1
3	About Kumarasambava	Lecture		CO 1
4	Fifth sarga of Kumarasambava	Lecture	e-resource	CO 1
5	Brahmacharipravesha	Lecture		CO 1
6	Parvathi's penance	PPT/Lecture		CO 1
7	Inviting Brahmachari	Lecture		CO 1
8	Purushartha	Lecture		CO 1
9	Himalaya	Lecture		CO 1
10	Conversation to Parvathy	Lecture		CO 1

11	Critisisation	PPT/Lecture		CO 1
12	Questioning	PPT/Lecture		CO 1
13	Upamas	PPT/Lecture		CO 1
14	Revision			
MODULE II				
15	Sanskrit Drama - Introduction	PPT/Lecture		CO 6,7
16	Mahakavi Bhasa's Dramas	Lecture		CO 6,7
17	Bhasa's Karnabharam	Lecture		CO 2,6,7
18	Mahabharatha	Lecture		CO 2,6,7
19	Mangalasloka	Lecture		CO 2,6,7
20	Entry of Karna	PPT/Lecture		CO 3,6,7
21	Request to Karna	PPT/Lecture		CO 3,6,7
22	Duryodhana's order	PPT/Lecture		CO 3,6,7
23	Karna's sadness	PPT/Lecture		CO 3,6,7
24	Revenge	Lecture		CO 3,6,7
25	Karna's birth	Lecture		CO 3,6,7
26	CIA-1			
27	Kunthi's request	Lecture		CO 3,5,6,7
28	Karna's study	Lecture		CO 3,5,6,7
29	ParaShurama's teaching	PPT/Lecture		CO 3,5,6,7
30	Parashrama's curse	PPT/Lecture		CO3,5,6,7
31	Greatness of Kshathriyas	PPT/Lecture		CO 3,5,6,7
32	Bravery of Karna	Lecture		CO 6,7
33	Indra's request to karna	Lecture		CO 6,7

34	Brahmana's blessing	PPT/Lecture		CO 6,7
35	Karna offering Horses	PPT/Lecture		CO 6,7
36	Karna offering elephants	PPT/Lecture		CO 3,6,7
37	Karna offering gold	Lecture		CO 3,6,7
38	Karna offering his kavacha	Lecture		CO 3,6,7
39	Indra accepting kavacha and kundala	PPT/Lecture		CO 3,6,7
40	Indra's blessing	PPT/Lecture		CO 3,6,7
41	The greatness of giving	PPT/Lecture		CO 3,6,7
42	Revision			
43	Revision			
44	Revision			
45	Revision			
	MODULE III			
46	Alankara introduction			
47	Kuvalayananda	PPT/Lecture		CO 4,7
48	Upama alankara	PPT/Lecture		CO 4,7
49	Upamana ,Upameya ,sadharana dharma	PPT/Lecture		CO 4,7
50	Ullekha Alankara	PPT/Lecture		CO 4,7
51	Dipika Alankara	PPT/Lecture		CO 4,7
52	Dipika example	PPT/Lecture	Video	CO 4,7
53	Vyathireka Alankara	PPT/Lecture		CO 4,7
54	Aprastutaprasamsa	PPT/Lecture		CO 4,7
55	Revision			
56	Svabhavokthi Alankara	Lecture	Debate	CO 4,7
57	Rupaka Alankara	PPT/Lecture		CO 4,7
58	Drishtantha Alankara	PPT/Lecture		CO 4,7

59	Dristantha -example	PPT/Lecture		CO 4,7
60	Arthantharanyasa	PPT/Lecture		CO 4,7
61	Prathama Ullekha	PPT/Lecture		CO 4,7
62	Dvitheeya Ullekha	PPT/Lecture		CO 4,7
CIA - II				
MODULE IV				
63	Characteristic of Karna	Lecture		CO 5,8
64	Characteristics of Shalya	Lecture	Group discussion	CO 5,8
65	Characteristics of Indra	Lecture		CO 5,8
66	Characteristics of Parvathi	PPT/Lecture		CO 5,8
67	Characteristics of Brahmachari	PPT/Lecture		CO 5,8
68	Himalaya	PPT/Lecture		CO 5,8
69	Revision			
70	Revision			
71	Revision			
72	Revision			

INDIVIDUAL ASSIGNMENTS/SEMINAR – Details & Guidelines

	Date of completion	Topic of Assignment & Nature of assignment (Individual/Group – Written/Presentation – Graded or Non-graded etc)	Course Outcome
1	12/08/2018	The role of Karna in Mahabharatha	CO 6,8
2	16/09/2019	Upama kalidasasya	CO 3

GROUP ASSIGNMENTS/ACTIVITES – Details & Guidelines

	Date of completion	Topic of Assignment & Nature of assignment (Individual/Group – Written/Presentation – Graded or Non-graded etc)	Course Outcome
1	23/9/2018	The moral values in Kumarasambava	CO 8
2	30/9/2018	Purushartha –the means of life	CO 8

References

1. Bhasanatakacakram O.R.I& Manuscript Library Trivandrum
2. Bhasanatakamanjari, Dr. V.S. Idakidath, Saparya Books, Kollam
3. Kumarasambhavam by Kuttikrishna Marar
4. Bhasanatakasarvasvam Sudhamsu Chathurvedi
5. Kalidasa Hridayam, V. Unnikrishnan Nair
6. The Problems of Bhasa Plays, Dr. N.P. Unni
7. Abhijnana Sakunthalam, M.R.Kale
8. Kalidasarvasvam, Sudhamsucathurvedi

Kuvalayanandam , Appayyadikshitha

COURSE PLAN

PROGRAMME	B.Sc BOTANY	SEMESTER	1
COURSE CODE & TITLE	19U1CCMAL1A കഥ, നോവൽ	CREDITS	4
HOURS/WEEK	4	HOURS/SEM	72
FACULTY NAME	VISHNU RAJ P, Dr. JUSTINA K AUGUSTINE		

CO No	COURSE OUTCOMES	CL	PSO	PO
1	കഥ, നോവൽ എന്നിവയെക്കുറിച്ച് മെച്ചപ്പെട്ട ധാരണ ഉണ്ടാക്കുക	Un	3	1,3
2	ഭാഷാപഠനം സാഹിത്യാനുഭവത്തിലൂടെ ആവിഷ്കരിക്കുക	Re	3	2,3
3	വായനാഭിരുചി വർദ്ധിപ്പിക്കുക	Ap	3	3,4
4	സാഹിത്യ പരിചയം ഉണ്ടാക്കുക	Un	3	1,2,3
5	വ്യാവഹാരിക തലത്തിൽ മാതൃഭാഷാപ്രയോഗിക്കുവാനുള്ള കഴിവ് നേടുക	Ap	1,3	1,3,5
6	ഭാഷാപഠനത്തിലൂടെ ആശയവിനിമയശേഷി വർദ്ധിപ്പിക്കുക	Cr	3	1,2,6

CO - PO/PSO Mapping												
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO 1	1	0	2	0	0	0	1	0	2	0	0	0
CO 2	0	3	2	0	0	0	0	0	2	0	0	0
CO 3	0	0	2	2	0	0	0	0	2	0	0	0
CO 4	1	2	2	0	0	0	2	0	2	0	0	0
CO5	2	0	2	0	2	0	1	0	2	0	0	0
CO6	2	2	0	0	0	2	0	1	2	0	0	0

Mapping Strength: 0-No Mapping strength, 1- Low, 2-Medium, 3-High

Session	Topic	Learning Resources	Teaching Method	Course Outcome
Module I				
1	മലയാളസാഹിത്യം സാമാന്യാവലോകനം	സാഹിത്യചരിത്രങ്ങൾ	Lecturing	1,2,3,4
2	ചെറുകഥയുടെ ചരിത്രം -1	സാഹിത്യചരിത്രങ്ങൾ	Lecturing	1,2,3,4
3	ചെറുകഥയുടെ ചരിത്രം-2	സാഹിത്യചരിത്രങ്ങൾ	Discussion	1,2,3,4,6
4	തകഴിയുടെ രചനാലോകം	നോവൽ-ചെറുകഥാപഠനങ്ങൾ	Lecturing	2,3,4
5	വെളുത്തകുഞ്ഞ്	Text	Reading	1,2,3,4,5,6
6	വെളുത്തകുഞ്ഞ്	Text	Group Discussion	1,2,3,4,5,6
7	സന്തോഷ് ഏഷിക്കാനത്തിന്റെ കഥകൾ	ചെറുകഥാപഠനങ്ങൾ	Lecturing	2,3,4
8	അഭിനയമൂഹൂർത്തങ്ങൾ കഥ	Text	Reading	1,2,3,4,5,6
9	അഭിനയമൂഹൂർത്തങ്ങൾ കഥ	Text	Group Discussion	1,2,3,4,5,6
10	ഒ വി വിജയനെ പരിചയപ്പെടുത്തുന്നു	നോവൽ-ചെറുകഥാപഠനങ്ങൾ	Lecturing	2,3,4
11	കടൽത്തീരത്ത്	Text	Reading	1,2,3,4,5,6
12	കടൽത്തീരത്ത്	Text	Group Discussion	1,2,3,4,5,6
13	എൻ എസ് മാധവന്റെ കൃതികളുടെ രാഷ്ട്രീയം	നോവൽ-ചെറുകഥാപഠനങ്ങൾ	Lecturing	2,3,4
14	നാലാലോകം കഥ	Text	Reading	1,2,3,4,5,6
15	നാലാലോകം കഥ	Text	Group Discussion	1,2,3,4,5,6
16	നാലാലോകം കഥ	Text	Group Discussion	1,2,3,4,5,6
17	ചെറുകഥ - അവലോകനം	Text	Group Discussion	1,2,3,4
Module II				
18	എം ടി വാസുദേവൻ നായരുടെ കൃതികൾ	നോവൽ-ചെറുകഥാപഠനങ്ങൾ	Lecturing	2,3,4
19	ഷെർലക്ക്	Text	Reading	1,2,3,4,5,6
20	ഷെർലക്ക്	Text	Group Discussion	1,2,3,4,5,6
21	ഉണ്ണി ആറിനെ പരിചയപ്പെടുത്തുന്നു	നോവൽ-ചെറുകഥാപഠനങ്ങൾ	Lecturing	2,3,4
22	ഒറ്റപ്പെട്ടവൻ-	Text	Reading	1,2,3,4,5,6
23	ഒറ്റപ്പെട്ടവൻ-	Text	Group Discussion	1,2,3,4,5,6
24	ജോൺ എബ്രഹാം: സാഹിത്യവും സിനിമയും	നോവൽ-ചെറുകഥാപഠനങ്ങൾ	Lecturing	2,3,4

25	നേർച്ചക്കോഴി	Text	Reading	1,2,3,4,5,6
26	നേർച്ചക്കോഴി	Text	Group Discussion	1,2,3,4,5,6
27	സാനാ ജോസഫ്, പുരാണ പുനർവായന	നോവൽ- ചെറുകഥാ പഠനങ്ങൾ	Lecturing	2,3,4
28	തായ്കുലം	Text	Reading	1,2,3,4,5,6
29	തായ്കുലം	Text	Group Discussion	1,2,3,4,5,6
30	ചെറുകഥ - അവലോകനം	Text	Group Discussion	1,2,3,4
31	Internal Assessment 1	Text		
32	Question paper discussion	Text	Group Discussion	1,2,3,4,5,6
Module III				
33	മാധവിക്കുട്ടിയുടെ കഥകളുടെ പ്രത്യേകതകൾ	നോവൽ- ചെറുകഥാ പഠനങ്ങൾ	Lecturing	2,3,4
34	പക്ഷിയുടെ മണം	Text	Reading	1,2,3,4,5,6
35	പക്ഷിയുടെ മണം	Text	Group Discussion	1,2,3,4,5,6
36	വൈക്കം മുഹമ്മദ് ബഷീറിന്റെ ലോകം	നോവൽ- ചെറുകഥാ പഠനങ്ങൾ	Lecturing	2,3,4
37	ശികിടിമുകൻ	Text	Reading	1,2,3,4,5,6
38	ശികിടിമുകൻ	Text	Group Discussion	1,2,3,4,5,6
39	സേതുവിന്റെ കൃതികൾ		Lecturing	2,3,4
40	ദൂത്	Text	Reading	1,2,3,4,5,6
41	ദൂത്	Text	Group Discussion	1,2,3,4,5,6
42	കെ ആർ മീരയുടെ എഴുത്തുകൾ	നോവൽ- ചെറുകഥാ പഠനങ്ങൾ	Lecturing	2,3,4
43	മോഹമഞ്ഞ	Text	Reading	1,2,3,4,5,6
44	മോഹമഞ്ഞ	Text	Group Discussion	1,2,3,4,5,6
45	ചെറുകഥ - അവലോകനം	Text	Group Discussion	1,2,3,4
Module - IV				
46	മലയാളനോവൽ ചരിത്രം	സാഹിത്യചരിത്രങ്ങൾ	Lecturing	1,2,3,4
47	മലയാളനോവൽ ചരിത്രം	സാഹിത്യചരിത്രങ്ങൾ	Group Discussion	1,2,3,4
48	മലയാളനോവൽ - നൂതന പ്രവണതകൾ	സാഹിത്യചരിത്രങ്ങൾ	Lecturing	1,2,3,4
49	മലയാളനോവൽ - നൂതന പ്രവണതകൾ	സാഹിത്യചരിത്രങ്ങൾ	Group Discussion	1,2,3,4
50	വിനോയ് തോമസ്-ആമുഖം	നോവൽ പഠനങ്ങൾ	Lecturing	1,2,3,4
51	കരിക്കോട്ടക്കരി- നോവൽ ആമുഖം	നോവൽ പഠനങ്ങൾ	Lecturing	1,2,3,4
52	കരിക്കോട്ടക്കരി അധ്യായം 1	Text	Group Discussion	1,2,3,4,6
53	കരിക്കോട്ടക്കരി അധ്യായം	Text	Group Discussion	1,2,3,4,6

	2			
54	കരിക്കോട്ടക്കരി അധ്യായം 3	Text	Group Discussion	1,2,3,4,6
55	കരിക്കോട്ടക്കരി അധ്യായം 4	Text	Group Discussion	1,2,3,4,6
56	കരിക്കോട്ടക്കരി അധ്യായം 5	Text	Group Discussion	1,2,3,4,6
57	കരിക്കോട്ടക്കരി അധ്യായം 6	Text	Group Discussion	1,2,3,4,6
58	കരിക്കോട്ടക്കരി അധ്യായം 7	Text	Group Discussion	1,2,3,4,6
59	കരിക്കോട്ടക്കരി അധ്യായം 8	Text	Group Discussion	1,2,3,4,6
60	കരിക്കോട്ടക്കരി അധ്യായം 9	Text	Group Discussion	1,2,3,4,6
61	കരിക്കോട്ടക്കരി അധ്യായം 10	Text	Group Discussion	1,2,3,4,6
62	കരിക്കോട്ടക്കരി അധ്യായം 11	Text	Group Discussion	1,2,3,4,6
	Internal Assessment 2			
63	കരിക്കോട്ടക്കരി അധ്യായം 12	Text	Group Discussion	1,2,3,4,6
64	കരിക്കോട്ടക്കരി അധ്യായം 13	Text	Group Discussion	1,2,3,4,6
65	കരിക്കോട്ടക്കരി അവലോകനം	Text	Group Discussion	1,2,3,4,6
66	സംവാദം- വിനോയ് തോമസ്	Text	Group Discussion	1,2,3,4,6
67	സെമിനാർ	Text	Presentation	1,2,3,4,6
68	സെമിനാർ	Text	Presentation	1,2,3,4,6
69	സെമിനാർ	Text	Presentation	1,2,3,4,6
70	സെമിനാർ	Text	Presentation	1,2,3,4,6
71	സെമിനാർ	Text	Presentation	1,2,3,4,6
72	Revision	Text	Group Discussion	1,2,3,4,5,6

ASSIGNMENTS

Sl no	Date of submission/completion	Topic of Assignment & Nature of assignment (Individual/Group - Written/Presentation - Graded or Non-graded etc)
1	By October	മലയാളത്തിലെ തെരഞ്ഞെടുത്ത കഥാകൃത്തുക്കളുടെ വിവരങ്ങൾ
2		സിലബസിൽ പഠിക്കാൻ ഇല്ലാത്ത ഒരു നോവലിന്റെ ആസ്വാദനം

SEMINAR

	Date of submission/completion	Topic of seminar & Nature of seminar (Individual/Group – Written/Presentation – Graded or Non-graded etc)	Weightage
1	By October	പാഠഭാഗങ്ങളുടെ അവതരണം	1,2,3,4
2		പാഠഭാഗങ്ങളുടെ അവതരണം	1,2,3,4,5

Referance :

1. സമ്പൂർണ്ണ മലയാള സാഹിത്യചരിത്രം - എഡിറ്റർ :പത്മനാഭൻ നായർ
2. ചെറുകഥ ഇന്നലെ ഇന്ന് - എം അച്യുതൻ
3. മലയാള നോവൽ സാഹിത്യചരിത്രം - കെ എം തരകൻ

COURSE PLAN – MICROBIOLOGY AND PHYCOLOGY

PROGRAMME	BACHELOR OF BOTANY	SEMESTER	1
COURSE CODE AND TITLE	15U1CRBOT1 -MICROBIOLOGY AND PHYCOLOGY	CREDIT	2
HOURS/WEEK	4	HOURS/SEM	72
FACULTY NAME	FR. JOSE JOHN & KIRAN GEORGE KOSHY		

	COURSE OUTCOMES	PO/ PSO	CL
CO 1	Students would be able to define process and principles in the field of microbial diversity	PO1, PO3, PO6, PSO2, PSO3	U
CO 2	Students would be able to explain the reproductive behaviour in Algae and microbes	PO1, PSO2, PSO3	A
CO 3	Students would be able to apply the acquired knowledge on the ecological significance of the lower groups of plants and protists	PO1, PO2, PSO4	U
CO 4	Students would be able to analyze economic significance of the lower groups of plants and protists	PO1, PO2, PSO1, PSO2, PSO3	An
CO 5	Evaluate various algal forms and classify them in the laboratory	PO1, PO2, PO3, PO4, PO5, PSO2, PSO3	U
CO 6	Develop new strategies based on various algal forms and on the basis of their applications		An

CL* Cognitive Level

CO -PO/PSO Mapping

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2				1		2				
CO 2	2						3				
CO 3	3						2				
CO 4	2					1		2		3	
CO 5											
CO 6											

Mapping Strength

0. No Mapping strength
1. Low
2. Medium
3. High

SESSION	TOPIC	LEARNING RESOURCES	VALUE ADDITIONS	COURSE OUTCOME
MODULE I				
1	Introduction, Scope of Microbiology	PPT	video	CO 1
MODULE II				
2	Bacteria: Fine structure - cell wall - Peptidoglycan	PPT/Lecture		CO 1
3	Cytoplasm - Nucleoid, Flagella	PPT/Lecture		CO 1
4	Reproduction- Binary fission	PPT/Lecture	e-resource	CO 1
5	Genetic recombination - Conjugation	PPT/Lecture		CO 1
6	Transformation	PPT/Lecture		CO 1
7	Transduction	Lecture		CO 1
8	Three Domains of Life	Lecture		CO 1
9	Mycoplasma - general characters	Lecture		CO 1
MODULE III				
10	Virus - General morphology and structure.	Lecture		CO 1
11	Plant viruses – architecture of TMV	PPT/Lecture		CO 1
12	RNA viruses, DNA viruses (Examples only)	PPT/Lecture		CO 1
13	Brief account of virus replication	PPT/Lecture		CO 1
MODULE IV				
14	Biofertilizers & Biopesticides and Production of single cell protein and Probiotics	PPT/Lecture		CO 2
15	Biogas production and Antibiotics	Lecture		CO 2
16	Reconversion of waste products and	Lecture		CO 2

	Bioremediation			
PHYCOLOGY				
MODULE I				
19	Introduction: general characters, habitat diversity, range of thallus structure and pigments in algae; Different types of life cycle and alternation of generations in algae.	Lecture	Original Photographs and Videos	CO 2, CO 3
20		PPT/Lecture		CO 2, CO 3
21		PPT/Lecture		CO 2, CO 3
22		PPT/Lecture		CO 2, CO 3
23		PPT/Lecture		CO 2, CO 3
24	Classification: by Fritsch (1945); brief introduction to the modern classification by Lee (2009) [up to divisions].	Lecture		CO 2, CO 3
25		Lecture		CO 2, CO 3
MODULE II				
27	"General characters of the following major groups with special reference to the structure, reproduction and life cycles of the following types.	Lecture		CO 2
28	a. Cyanophyceae: Nostoc	Lecture		CO 2
29	b. Chlorophyceae: Volvox, Oedogonium, Cladophora, Chara	PPT/Lecture		CO 2
30	c. Xanthophyceae: Vaucheria	PPT/Lecture		CO 2
31	d. Bacillariophyceae: Pinnularia	PPT/Lecture		CO 2
32	e. Phaeophyceae : Sargassum			
MODULE III				
33	a. Algae as pollution indicator and in waste water treatment	PPT/Lecture		CO 4
34	b. Commercial products: Agar, Alginates, Carrageenin, Diatomaceous earth"	PPT/Lecture		CO 4
35		PPT/Lecture		CO 4
36	c. Algae in soil fertility, Fertilizer, Nitrogen fixation, minerals, soil algae and symbiosis	Lecture	Quiz	CO 4
MODULE IV				
37	Algal culture: isolation, cultivation and preservation of micro- and macro-algae. (Brief account only)	Lecture	Q & Ans Session	CO 3
38		PPT/Lecture		CO 3
39	Algal culture: isolation, cultivation and preservation of micro- and macro-algae. (Brief account only)	PPT/Lecture		CO 3
PRACTICALS				
40	1. Preparation of bacterial smear.			CO 1
41				CO 1
42				CO 1
43	2. Grams staining.			CO 1
44				CO 1

45	3. Isolation of microbes from soil (Streaking method).	Laboratory		CO 1
46				CO 1
47				CO 1
48				CO 1
49				CO 1
50				CO 1
51				CO 1
52				CO 1
53	"1. Conduct a field visit to any one of the ecosystems rich in Algae to experience algal diversity. Submit a report of the visit with photographs.		CO 5, CO 6	
54			CO 5, CO 6	
55			CO 5, CO 6	
	2. Make micro preparation of vegetative and reproductive structures of the types mentioned in the syllabus and make labelled sketches of the specimens observed.		CO 5, CO 6	
56			CO 5, CO 6	
57			CO 5, CO 6	
58			CO 5, CO 6	
59	3. Identify the algal specimens up to the generic level by noting their key characters.		CO 5, CO 6	
60			CO 5, CO 6	
61			CO 5, CO 6	
62	4. Algal Culturing: isolation and cultivation of microalgae and macro algae using suitable growth media [Demonstration only].		CO 5, CO 6	
63			CO 5, CO 6	
64			CO 5, CO 6	
65	5. Familiarize the technique of algal collection and preservation and submit at least five algal specimens.		CO 5, CO 6	
66			CO 5, CO 6	
			CO 5, CO 6	
67				
			CO 5, CO 6	
68				

69			CO 5, CO 6
70			CO 5, CO 6
71			CO 5, CO 6
72			CO 5, CO 6

REFERENCES

1. Agarwal S.K, 2008. Foundation course in Biology, Ane Books Pvt. Ltd., New Delhi.
2. Anand N, 1989. Culturing and cultivation of BGA. Handbook of Blue Green Algae.
3. Aneja K. R, 1996. Experiments in Microbiology, Plant pathology, Tissue culture and Mushroom cultivation. Wishwa Prakasan, Delhi.
4. Bilgrama K. S & Saha L. C, 1996. Text Book of Algae, C B S Publishers & Distributors
5. Carpenter P. L, 1967. Microbiology., W. B Saunder & Co, Philadelphia
6. Chapman, V. J, 1962. The Algae.: Macmillan & co. Ltd, London
7. Christian Hoek, 1995. Algae: An Introduction to Phycology, Cambridge University Press.
8. Dube H.C, 2008. Fungi, Bacteria and Viruses, Agrobios, Meerut.
9. Frazier W C & Westhoff D.C, 1978. Food Microbiology. TMH Edn.
10. Fritsch F. E, 1945. Structure and Reproduction of Algae. Vol.1: Cambridge University Press, London.

COURSE PLAN – GENERAL CHEMISTRY

PROGRAMME	COMPLEMENTARY CHEMISTRY FOR BACHELOR OF SCIENCE IN BOTANY	SEMESTER	1
COURSE CODE AND TITLE	15U1PCHE1: GENERAL CHEMISTRY	CREDIT	2
HOURS/WEEK	2	HOURS/SEM	36
FACULTY NAME	DR. IGNATIUS ABRAHAM AND DR. RAGI A S		

	COURSE OUTCOMES	PO / PSO	CL
CO 1	Describe different models of atomic structure.	PO 1, PSO 1	U
CO 2	Define acids and bases and explain the concept of equilibrium.	PO 2, PSO 3	U
CO 3	Understand the concept of solubility and its applications in various fields.	PO 3, PSO 1	U
CO 4	Explain the fundamentals of nuclear chemistry.	PO 4 and PO 5, PSO 1, PSO 2	U
CO 5	Generate a basic idea on applications of nuclear energy in various fields and the possible hazards.	PO 6, PSO 1	U
CO 6	Explain the fundamentals of analytical chemistry.	PO 5, PSO 4	U
CO 7	Understand the basics of thermodynamics.	PO 1, PSO 1	U

CL* Cognitive Level

CO -PO/PSO Mapping

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2				1		2				
CO 2		2					3				
CO 3			3				2				
CO 4				2	1		3	2		3	
CO 5						3	2				
CO 6					2					4	
CO 7	2						2				

Mapping Strength

- 0- No Mapping strength
- 1- Low
- 2- Medium
- 3- High

SESSION	TOPIC	LEARNING RESOURCES	VALUE ADDITIONS	COURSE OUTCOME
MODULE I : Atomic Structure : Dr. Ignatious Abraham (9h)				
1	Introduction: Atoms, Planck's quantum Theory, Photoelectric effect	Chalk & Board	video	CO 1
2	Postulates of bohr's theory, Energy levels in atom	Chalk & Board		CO 1
3	origin of hydrogen spectrum	Chalk & Board		CO 1
4	Sommerfeld's extension of Bohr's Theory	Chalk & Board		CO 1
5	Shortcomings of Bohr Theory	Chalk & Board		CO 1
6	Dual nature of matter and radiation. Derivation of de Broglie equation	Chalk & Board		CO 1
7	Wave nature of electron and quantisation of angular momentum, Heisenberg's uncertainty principle	Chalk & Board		CO 1
8	Concept of orbital, Quantum numbers, shapes of orbitals	Chalk & Board		CO 1
9	Electronic configuration of atoms - Aufbau principle, Hund's rule of maximum multiplicity, Pauli's exclusion principle	Chalk & Board		CO 1
MODULE II: Concept of Equilibrium: Dr. Ignatious Abraham (8h)				
10	Acids and bases	Chalk & Board		CO 2
11	Theories of acids and bases	Chalk & Board		CO 2
12	Ionic product of water, introductory idea of pH, pOH.	Chalk & Board	quiz	CO 2
13	Strengths of acids and bases, Ka and Kb, pKa and pKb	Chalk & Board		CO 2

14	Buffer solution, Henderson equation	Chalk & Board		CO 2
15	Hydrolysis of salt, solubility	Chalk & Board		CO 2
16	Solubility product, application	Chalk & Board		CO 3
17	Common ion effect, application.	Chalk & Board		CO 3
MODULE III: Nuclear Chemistry : Dr.Ragi A.S (6h)				
18	Stability of Nucleus	Chalk & Board		CO 4
19	Natural radioactivity, induced radioactivity	Chalk & Board	quiz	CO 4
20	Fertile and fissile isotopes, units of radioactivity.	Chalk & Board		CO 4
21	Nuclear Reactions: fission and fusion, chain reactions	Chalk & Board		CO 4
22	Disposal of nuclear wastes	Chalk & Board		CO 5
23	Applications of radioactivity	Chalk & Board		CO 5
MODULE IV: Analytical Chemistry- Basic Principles: Dr.Ragi A.S (5h)				
24	Concentration terms- molality, molarity, normality, weight percentage, ppm, and millimoles.	Chalk & Board		CO 6
25	Titrimetric method of analysis: General principle, types of titrations, requirements for titrimetric analysis.	Chalk & Board		CO 6
26	Primary and secondary standards, criteria for primary standards	Chalk & Board		CO 6
27	Preparation of standard solutions, standardization of solutions	Chalk & Board		CO 7
28	Problems	Chalk & Board	Quiz	CO 7
MODULE V: Laws of Thermodynamics : Dr.Ragi A.S (8h)				
29	System and Surrounding and First Law of Thermodynamics	Chalk & Board		CO 7
30	Second law of Thermodynamics: free energy, Entropy and Spontaneity, Statement of second law based on entropy	Chalk & Board		CO 7
31	Entropy change in Phase transitions	Chalk & Board		CO 7
32	entropy of fusion, entropy of vaporization, entropy of sublimation	Chalk & Board		CO 7
33	The concept of Gibbs's free energy- Physical significance of free energy, conditions for equilibrium & spontaneity based on ΔG values.	Chalk & Board		CO 7
34	Effect of temperature on spontaneity of Reaction.	Chalk & Board		CO 7
35	Third law of thermodynamics	Chalk & Board		CO 7
36	Problems based on Laws of Thermodynamics	Chalk & Board	Quiz	CO 7

INDIVIDUAL ASSIGNMENTS/SEMINAR – Details & Guidelines

	Date of completion	Topic of Assignment & Nature of assignment (Individual/Group – Written/Presentation – Graded or Non-graded etc)	Course Outcome
1	04/08/2018	Applications of solubility product	CO 3
2	28/10/2018	Effect of temperature on spontaneity of Reaction.	CO 7

GROUP ASSIGNMENTS/ACTIVITES – Details & Guidelines

	Date of completion	Topic of Assignment & Nature of assignment (Individual/Group – Written/Presentation – Graded or Non-graded etc)	Course Outcome
1	02/11/2018	Concentration terms	CO 6

REFERENCES

1. P. L. Soni, Inorganic Chemistry.
2. C. N. R. Rao, University General Chemistry, Macmillan.
3. R. A. Day Junior, A.L. Underwood, Quantitative Analysis, 5th edn. Prentice Hall of India Pvt. Ltd. New Delhi, 1988.
4. R. Gopalan, Analytical Chemistry, S. Chand and Co., New Delhi.
5. B. R. Puri, L. R. Sharma, M.S. Pathania, Elements of Physical Chemistry, 3rd edn. Vishal Pub. CO., 2008.
6. B. R. Puri, L. R. Sharma, Kalia, Principles of Inorganic Chemistry, 31st edn. Milstone (2010). Manas Chanda, Atomic Structure and Molecular Spectroscopy.
7. Vogel's Text Book of Quantitative Chemical Analysis, J. Mendham, R. C. Denney, J.D. Barnes, M. Thomas, 6th edn. Pearson Education (2003).

COURSE PLAN – Complementary Zoology

PROGRAMME	B.Sc. ZOOLOGY COMPLEMENTARY COURSE	SEMESTER	1
COURSE CODE AND TITLE	15U1CPZOO1: Animal Diversity – Non-Chordata	CREDIT	2
HOURS/WEEK	4	HOURS/SEM	36
FACULTY NAME	Dr. DIVYA SEBASTIAN		

	COURSE OUTCOMES	PO/ PSO	CL
CO 1	Understand the basic concepts and principles of invertebrate taxonomy	PO1, PO2	U
CO 2	Analyse the salient features and taxonomy up to phylum of Kingdom Protista	PO1, PSO2, PSO3	A
CO 3	Understand the salient features and taxonomy of mesozoa and Parazoa.	PO1, PO2, PSO1	U
CO 4	Differentiate the coral reefs and the rich biodiversity of coelenterates	PO1, PO2, PSO1, PSO2, PSO4	An
CO 5	Understand the pathogenicity of round worms and flat worms.	PO1, PO2, PO3, PO4, PO5, PSO2, PSO3	U
CO 6	Understand the salient features and taxonomy of segmented, jointed and shelled invertebrates.	PO1, PO4 PSO1	U
CO 7	Understand the morphological aspects, structural and functional facets of <i>Penaeus</i> .	PO1, PO4 PSO1	U
CO8	Impart the knowledge of the pests of paddy, coconut and stored grains.	PO1, PO4 PSO1	A
CO9	Analyze the salient features of Hemichordata with reference to evolutionary sequence	PSO 5, PO1	A

CO -PO/PSO Mapping

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	2									
CO 2	2							2	2		
CO 3	2	2					2				
CO 4	2	3					3	2		3	
CO 5	2	1	2	1	2			2	2		
CO 6	1			2			1				
CO 7	1			2			2				
CO 8	1			2			1				
CO 9	1										2

Mapping Strength

- 0- No Mapping strength
- 1- Low
- 2- Medium
- 3- High

SESSION	TOPIC	LEARNING RESOURCES	VALUE ADDITIONS	COURSE OUTCOME
MODULE I				
1	General Introduction, 5 Kingdom classification, Classification in general	Lecture/ppt		CO 1
2	Classification up to Classes	Lecture /PPT		CO 1
MODULE II				
3	Kingdom Protista; Salient features and classification up to phyla	PPT	Video	CO 2
4	Phylum Rhizopoda: Amoeba Phylum Actinopod: Actinophrys	Lecture	Demo	CO 2
5	Phylum Parabasalia: Trychonympha Phylum Dinoflagellate: Noctiluca	Lecture	Video	CO 2
6	Phylum Metamonada : Giardia Phylum Kinetoplasta: Trypanosoma	Lecture	Demo	CO 2
7	Phylum Euglenophyta: Euglena Phylum Cryptophyta: Cryptomonas	PPT		CO 2
8	Phylum Opalinata: Opalina Phylum Bacillariophyta: Diatoms	PPT	Video	CO 2

9	Phylum Chlorophyta: Volvox Phylum Choanoflagellates: Proterospongia	PPT	Demo	CO 2
10	Phylum Sporozoa: Plasmodium Phylum Ciliophora: Paramecium	PPT/Lecture	Video	CO 2
11	Phylum Rhodophyta: Red Alga Phylum Microsporidia: Nosema	PPT/Lecture	Video	CO 2
12	Pathogenic Protista–Plasmodium	Lecture	Video	CO 2
13	Pathogenic Protista – Entamoeba	Lecture	Video	CO 2
CIA-1				
MODULE III				
14	Mesozoa – eg. Rhopalura	PPT/Lecture	Video	CO 3
15	Phylum Parazoa	PPT/Lecture	Video	CO 3
16	Phylum Porifera – eg Leucosolenia Phylum Placozoa –eg.Trycoplax adherens	PPT/Lecture		CO 3
MODULE IV Coelenterate				
17	Phylum Coelenterate salient features	Lecture	Video	CO 4
18	Hydrozoa – Physalia Scyphozoa – Aurelia	PPT/Lecture	Video	CO 4
19	Anthozoa – Adamsia Corals and coral reefs.	PPT/Lecture	Video	CO 4
Module V. Phylum - Platyhelminthes				
20	Phylum - Platyhelminthes Salient features, classification up to classes 1.Turbellaria – Planaria	PPT/Lecture		CO 5
21	CIA- II	2 hrs		
Module VI. Phylum Nematoda				
22	Phylum Nematoda Salient features, classification up to classes	Lecture	Video	CO 5
23	Phasmidia - Wuchereria 2.Aphasmidia – Trichinella	PPT/Lecture	Video	CO 5
Revision & Evaluation of the course				
Module VII. Phylum: Annelida				
24	Phylum Annelida: Salient features and classification up to class.	PPT/Lecture	Video	CO 6
25	Class 1: Polychaeta (eg: Nereis) Class 2: Oligochaeta (eg: Pheretima) Class 3: Hirudinomorpha (eg: Hirudinaria)	PPT/Lecture	Video	CO 6
Module 8 – Phylum : Arthropoda				
26	Arthropoda:Salient features. Fenneropenaeus (Penaeus)habitat,	PPT/Lecture	Video	CO 7

	morphology,			
27	Appendages, sexual dimorphism, digestive system, respiratory system, circulatory system, excretory system	PPT/Lecture	Video	CO 7
28	Nervous system, sense organs	PPT/Lecture		CO 7
29	Reproductive system, larval stages.	PPT/Lecture		CO 7
30	Classification up to class with one example	PPT/Lecture		CO7
27	Phylum Onychophora – eg. Peripatus (Mention its affinities) Insect pests	PPT/Lecture		CO 8
28	Pests of coconut – Oryctes rhinoceros, Rhynchophorus ferrugineus, Nephantisserinopa, Eriophid mite	PPT/Lecture	Live discussion	CO 8
29	Pests of paddy – Leptocorisaacuta, Spodoptera mauritius 3. Pests of stored grains - Trogoderma granarium, Tribolium castaneum, Sitophilus oryzae	PPT/Lecture	Live discussion	CO8
Module 9: Phylum : Mollusca				
30	Salient features and classification up to class	PPT/Lecture		CO 6
31	Class 1: Aplousobranchia (eg: Neomenia) Class 2: Monoplousobranchia (eg: Neopilina) Class 3: Polyplousobranchia	PPT/Lecture	Live discussion	CO 6
32	Class 4: Bivalvia (eg: Perna) Class 5: Gastropoda (eg: Xancus) Class 6: Cephalopoda (eg: Sepia) Class 7: Scaphopoda (eg: Dentalium)	PPT/Lecture	Video	CO 6
Module 10: Phylum: Echinodermata				
33	Salient features and classification up to class	PPT/Lecture		
34	Class 1: Asterozoa (eg: Astropecten) Class 2: Ophiurozoa (eg: Ophiothrix) Class 3: Echinozoa (eg: Echinus)	PPT/Lecture	Video	CO 6
35	Class 4: Holothurozoa (eg: Holothuria) Class 5: Crinozoa (eg: Antedon)	PPT/Lecture	Video	CO 6
Module 11. Phylum Hemichordate				
36	Phylum Hemichordata	PPT/Lecture		CO 8
37	Salient features eg: Balanoglossus	PPT/Lecture		CO8

ASSIGNMENTS

	Date of completion	Topic of Assignment & Nature of assignment (Individual/ /Presentation – Graded)	Course Outcome
1	4/11/2019	Make a classification of chart of invertebrates	CO2

GROUP ASSIGNMENTS/ACTIVITES – Details & Guidelines

	Date of completion	Video presentation-Individual	Course Outcome
1	14/11/20	Find the invertebrates around you premises	CO 5

REFERENCES

- Barnes, R.D. , 1987. Invertebrate Zoology (W.B. Saunders, New York).
- Barrington, E.J.W., 1967. Invertebrate Structure and function (ELBS and Nelson , London).
- Dhami, P.S. and Dhami, J.K. 1979. Invertebrate Zoology (R. Chand and Co. New Delhi).
- Ekamberanatha Ayyar M. (1990) A Manual of Zoology, Volume I. Invertebrate Part I and Part II S. Viswanathan Printers & Publishers Pvt. Ltd.
- Groove, A.J. and Newell, G.E. 1974. Animal Biology – Indian Reprint (University Book Stall, New Delhi).
- Hyman, L.H. The Invertebrate vols. (McGraw-Hill) 1942. Comparative vertebrate Anatomy (The University of Chicago Press

Web resource references:

- <https://www.nationalgeographic.com/animals/invertebrates/>