

Biographical Sketch

Name : Dr. Usha Keshan
Qualifications and Eligibility : M.Sc., Ph.D., NET
Designation : Associate Professor in Botany
E-mail : ushakeshan@gmail.com
Date of Birth : 15.04.65
Specialization : Plant Physiology & Plant Biochemistry
Department : Department of Botany
College : Sivanath Sastri College
Date of Joining : 01.09.97



ADDRESS:

College : 23/49, Gariahat Road, Kolkata-700029
Residence : 321/ A, Diamond Harbour Road, Kolkata-700034 (Near Behala P.S.)

PHONE NO.:

College : 033-2461 2689/1236, 033-24601521 (Office)
Residence : 9831247299 (M)

Academic qualifications:

Exam Passed	Board/University	Subjects	Year	Division/Class
Madhyamik	West Bengal Board of Secondary Education	Hindi, English, Math, Physical Science, Life Science, History, Geography, Home Science (addl.)	1981	1 st Division
Higher Secondary	West Bengal Council of Higher Secondary Education	Hindi, English, Physics, Chemistry, Biology, Math (addl.)	1983	2 nd Division
B.Sc. (Hons.)	University of Calcutta	Botany (Hons.), Zoology, Physiology, English (addl.)	1986	2 nd Class
M.Sc.	University of Calcutta	Botany (Spl. Paper- Plant Physiology & Biochemistry)	1988	1 st Class
Ph.D. (Sc.)	University of Calcutta	Botany	1995	
Others (Diploma/Certificate)	NET – qualified, Joint CSIR-UGC, JRF Examination	Life Sciences	1988 (Held on 22.01.89)	Qualified

Professional Experiences:

Name of the College/ University	Designation	From	To	Total
Department of Botany, Bethune College, Kolkata, West Bengal, INDIA	Part –Time Lecturer in Botany	22.08.94	30.09.97	3 years
Department of Botany, Sivanath Sastri College 23/49, Gariahat Road,	Lecturer in Botany	01.09.97	31.08.01	4 years
	Senior Lecturer in Botany	01.09.01	31.08.06	5 years
	Reader in Botany	01.09.06	31.08.09	3 years

Kolkata-700029 West Bengal, INDIA	Associate Professor in Botany	01.09.09	Present	
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TEACHING EXPERIENCE: (In College / University)

Course	Name of the College/ University	From	To	Total
<u>H.S.</u>	Sivanath Sastri College	01.09.97	2001	4 Years
<u>Degree (General)</u> B.A./ B.Sc. General Botany	Bethune College (as Part-Time)	22.08.94	30.09.97	3 Years
	Sivanath Sastri College (as Full Time)	01.09.97	Till now	22 Years
<u>Degree (Honours)</u> B.Sc. (Hons.) Botany	Bethune College (as Part Time)	22.08.94	30.09.97	3 Years

Fellowships/Awards/Recognitions:

Title of the Project	Funding Agency	Place of Research	From	To	Total Period
Metal phytotoxicity & its influence on growth & metabolism of pulses in relation to productivity	Council of Scientific & Industrial Research (CSIR)	Plant Physiology Laboratory Department of Botany University of Calcutta 35, Ballygunge Circular Road, Kolkata-700019, West Bengal, INDIA	JRF-NET (CSIR) 28.05.90	31.05.92	5 Years
			SRF-NET (CSIR) 01.06.92	31.05.95	
Toxic action of cadmium on <i>Vigna radiata</i> L. Wilczek, preventive measures & exploration of possible means of its detoxification	Council of Scientific & Industrial Research (CSIR)	Plant Physiology Laboratory Department of Botany University of Calcutta 35, Ballygunge Circular Road, Kolkata-700019, West Bengal, INDIA	Research Associate (CSIR) 15.04.96	29.08.97	1 Year 4 months
Toxicity of cadmium on <i>Vigna radiata</i> L. Wilczek, preventive measures and exploration of possible means of its detoxification – Minor Project	University Grants Commission (UGC)	Department of Botany Sivanath Sastri College 23/49, Gariahat Road, Kolkata-700029, West Bengal, INDIA	01.06.04	31.05.06	2 years

National:

- An Award of **Junior Research Fellowship, (JRF-NET)**, Council of Scientific and Industrial Research, India, 1990-1992
- An Award of **Senior Research Fellowship, (SRF-NET)**, Council of Scientific and Industrial Research, India, 1992-1995
- An Award of **Research Associate, (RA)**, Council of Scientific and Industrial Research, India, 1996-1997
- Awarded a **Gold medal** for the best paper in the year, 1996, from XV Annual Conference of Society of Toxicology, India.

Topic of Thesis: “Cadmium phytotoxicity and its influence on some morphological, biochemical and ultrastructural characteristics of mungbean (*Vigna radiata* L. Wilczek) in relation to productivity”.

CUE-A09619-T05795	Cadmium phytotoxicity and its influence on some morphological biochemical and ultrastructural characteristics of Mungbean vigna radiata L Wilczek in relation to productivity	Keshan, Usha	Mukherji, Subhendu	1994
https://www.caluniv.ac.in/digital-lib-dev/ebook/list_document.php?cat=1&department=562&document_folder=phd/T05795				

Memberships of academic societies etc:

1. Life Member of Society of Toxicology, India (STOX –2752)
2. Life Member of National Botanical Society
3. Life Member of Probir Chatterjee Research Foundation
4. Life Member of Plant Physiology Forum

OTHER RELEVANT DETAILS:

1. First Aid Course
2. Home Nursing Course

Research Projects completed:

Completed Project

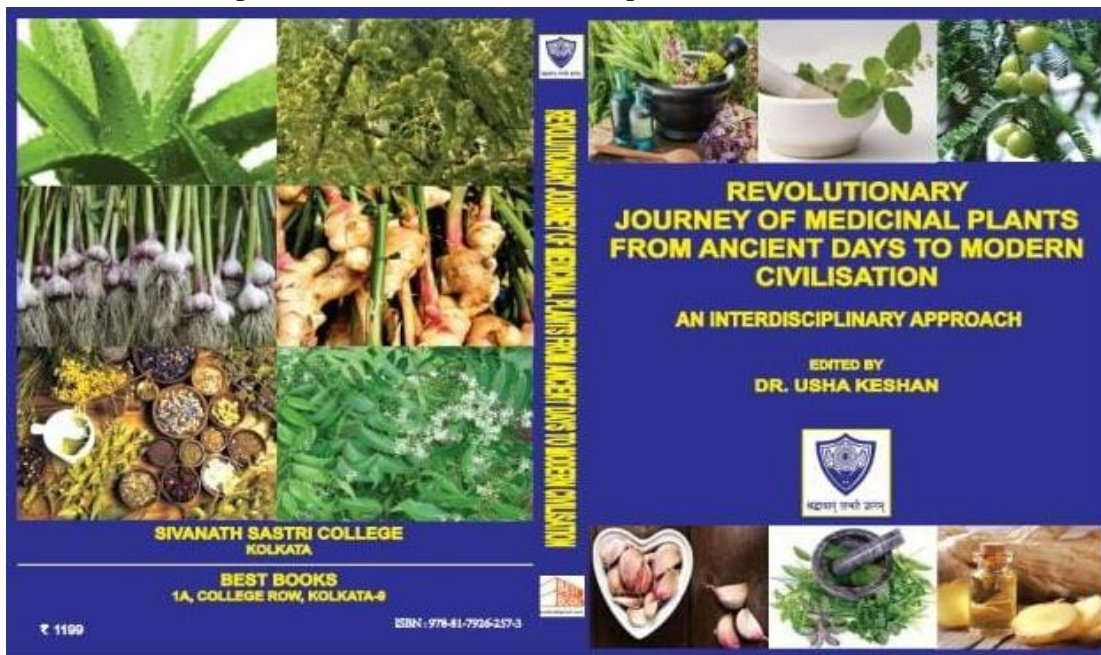
- Metal phytotoxicity and its influence on growth and metabolism of pulses in relation to productivity
Funding Agency: CSIR, New Delhi, **Duration:** May 28, 1990—May31, 1995
- Toxic action of cadmium on *Vigna radiata* L. Wilczek, preventive measures and exploration of possible means of its detoxification
Funding Agency: CSIR, New Delhi, **Duration:** April 15, 1996—August 29, 1997
- Toxicity of cadmium on *Vigna radiata* L. Wilczek, preventive measures and exploration of possible means of its detoxification – **Minor Project**
Funding Agency: UGC, New Delhi, **Duration:** June 1, 2004- May 31, 2006
- One year *interdisciplinary* (Department of Botany, Philosophy and Sanskrit) Research Project as “Revolutionary Journey of Medicinal Plants From Ancient Days to Modern Civilizations” – **Minor Project**
Funding Agency: Received an advance amount of ₹ 1,00,000/- dated 29.8.18 from College fund for one year

Publications:

- a. **Articles in peer reviewed journals/UGC listed journals : Six**

1	Keshan, U. and Mukherjee, S. (1992). Effect of cadmium toxicity on chlorophyll content, Hill activity & chlorophyllase activity in <i>Vigna radiata</i> L. leaves. Indian Journal of Plant Physiology Vol. XXXV, No.3 Pp 225-230
2	Usha Keshan and S. Mukherjee (1994). Phytotoxic effects of cadmium sulphate on nitrogen content, nitrogen fixation, nitrate reductase & leghemoglobin content in root nodules of mungbean, <i>Vigna radiata</i> L. Wilczek. Indian Journal of Experimental Biology Vol. 32 Pp 351-353.
3	Usha Keshan and S.Mukherji (1994) Phytotoxic effects of cadmium sulphate as foliar spray in mungbean. Recent Researches in Ecology, Environment and Pollution Vol. 9, pp7-13 (ed. By Malabika Ray)
4	Usha Keshan and S. Mukherji (1995). Toxic effect of cadmium sulphate on ATPase, fructose 1,6-bisphosphate aldolase, succinate dehydrogenase & glucose 6-P- dehydrogenase in mungbean (<i>Vigna radiata</i> L. Wilczek), Indian Journal of Experimental Biology Vol. 33 Pp 889-891
5	Usha Keshan and S. Mukherji (1997). Phytotoxic effects of cadmium as foliar spray in mungbean. Indian Journal of Toxicology No. 1 Pp 15-22
6	Usha Keshan (1999).Effects of cadmium ions on the activity of ammonia assimilating enzymes in root nodules, ultrastructure of leaf and nodule in mungbean (<i>Vigna radiata</i> L. Wilczek). Indian Journal of Experimental Biology Vol. 37 Pp 1227-1233

b. **Books:** After pandemic the MRP - published in the form of book



- Book Published in Kolkata Book Fair 8th March 2022
- ISBN: 978-81-7926-257-3
- **Name of the Book:** Revolutionary Journey of Medicinal Plants from Ancient days to Modern Civilizations (An Interdisciplinary approach)
- **Edited by** Dr. Usha Keshan

c. **Chapters in edited books** : nil

d. Chapters in conference proceedings : nil

Papers presented:

a. International level conferences/seminars :

Date	Seminars/ conferences	Topic	Participant	Place
24-28 th Nov. 1991	2nd Congress of Toxicology in Developing Countries	Cadmium Phytotoxicity in higher plants- Mechanism of action and factors for increased tolerance. Abs No. P.1.96, pp230 Chandan Mukherjee, Usha Keshan & S. Mukherjee	Poster presented	Ashoka Hotel, New Delhi

b. National level conferences/seminars:

Date	Seminars/ conferences	Topic	Participant	Place
21-23 rd Feb. 1992	16th National Convention on Environmental Engineering	Phytotoxic effects of cadmium sulphate as foliar spray in mungbean plant. Abs. No. Late Abstract Usha Keshan & S. Mukherjee	Papers presented	Visva-Bharati, Santiniketan
23-30 th Nov. 1992	Platinum Jubilee Celebration of Bose Institute	Cadmium phytotoxicity and its influence on growth, photosynthesis, nitrogen fixation and assimilation of nitrogen as a foliar spray in mungbean (<i>Vigna radiata</i> L. Wilczek) plant Abs No. MM14Usha Keshan &S.Mukherjee	Papers presented	Bose Institute, Calcutta
11-12 th April 1995	Diamond Jubilee Celebration of National Botanical Society, Calcutta	Toxic effects of cadmium sulphate as foliar spray on mungbean plant Abs. No. 10. Pp7 Usha Keshan & S. Mukherjee	Papers presented	Science College, Calcutta
15-16 th Nov. 1996	XV Annual Conference of Society of Toxicology, India	Phytotoxic effects of cadmium sulphate as foliar spray on mungbean plants. Abs. No. 61 Usha Keshan (Awarded a Gold Medal for the Best Paper in the year 1996)	Papers presented	WBUAFS, Calcutta (held at Faculty of Veterinary & Animal Science)

c. State level conferences/seminars:

Date	Seminars/ conferences	Topic	Participant	Place
17-19 th Nov. 1996	National Symposium on Plant Physiology for National Development	Toxic effect of cadmium as foliar spray on mungbean plant Abs.No. PRE 10 pp30 Usha Keshan & S. Mukherji	Papers presented	Bose Institute, Calcutta

Conferences/seminars attended

(i) As a resource person

- a) International level conferences/seminars : nil
 b) National level conferences/seminars : nil
 c) State level conferences/seminars : nil
 (ii) As a **participant**
 a) **International level conferences/seminars** :

Date	Seminars/ conferences	Place
04 th Jan. 2010	Interdisciplinary seminar on social Sciences – Sponsored by Fulbright Hays Group Projects Abroad, U.S. Department of Education	Sivanath Sastri College, Kolkata

b) National level conferences/seminars:

Date	Seminars/ conferences	Place
23-24 th Sept. 2000	UGC- sponsored -Two days Seminar on "Environment Studies in Collegiate Education	Bangabasi College of Commerce, Calcutta
4 th March, 2005	UGC- sponsored -One day seminar on Recent Trends in Plant Sciences	Botany Dept., Asutosh College, Kolkata
09 th Jan. 2010	In the National Seminar on Angiosperms Taxonomy: A Tribute to Dr. Sushil Kumar Mukherjee (Botanical Survey of India) – jointly organised by the Botanical Society of Bengal & the Department of Botany, University of Calcutta.	Department of Botany , University of Calcutta, Kolkata
19 th Dec. 2011	UGC- sponsored -One day seminar organised by Bengali Department, Sivanath Sastri College	Sivanath Sastri College, Kolkata
20 th Dec. 2011	UGC- sponsored -One day seminar organised by English Department, Sivanath Sastri College	Sivanath Sastri College, Kolkata
6-7 th August, 2013	UGC – sponsored Two days National seminar on Swami Vivekananda : The Sole Embodiment of India organised by Sivanath Sastri College in Collaboration with Ramakrishna Mission Institute of Culture, Golpark	Ramakrishna Mission Institute of Culture, Golpark, Kolkata
4-6 th Dec. 2014	In the National Symposium on Plant diversity : structure, function, utilization & conservation – jointly organised by the Botanical Society of Bengal & the Dept. of Botany, University of Calcutta.	Dept. of Botany , University of Calcutta, Kolkata
11 th May, 2015	One day seminar on Enhancement of Quality in Institutions of Higher Education – organised by Internal Quality Assurance Cell, Sivanath Sastri College	Sivanath Sastri College, Kolkata
19 th Dec., 2016	UGC sponsored – One day National Seminar on “Gender As Perspective: Reflection on Different Disciplines” Organised by Departments of English, History, Political Science & Women’s Studies, Sivanath Sastri College, Kolkata. In Collaboration with Mahanirban Calcutta Research Group	Sivanath Sastri College, Kolkata
19 th Jan., 2017	UGC sponsored –National Seminar One day seminar on “Bangla O Pratibeshi Sahitya: Sahisnutar Adan- Pradan” Organised by Department of Bengali Sivanath Sastri College, Kolkata. In Collaboration with Comparative Language and Literature, University of Calcutta	Sivanath Sastri College, Kolkata

02-03 Nov. 2017	Two days National Symposium on “Advances in Biology: Exploitation of Phyto-resources” Organised by Department of Botany Dr. A.P.J. Abdul Kalam Govt. College, New Town, Kolkata	Ramakrishna Mission Institute of Culture, Kolkata
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c) **State level conferences/seminars** :

Date	Seminars/ conferences	State level	Place
28 th Feb - 1 st March, 2003	Two days seminar on New Frontiers in Plant Science	UGC-Sponsored	Botany Dept., Charuchandra College, Kolkata
6 th Feb, 2016	One day seminar on “SUNDERBANS - THE ENDANGERED ECOSYSTEM” – ORGANISED by Dept. Of Botany & Geography, Muralidhar College, Kolkata in collaboration with Dept. of Botany, Sivanath Sastri College, Kolkata	UGC sponsored	Muralidhar College, Kolkata

d) **Webinar attended**

Date	Webinar	Organized by
5 th June, 2020	One day International Webinar on “ Living With Lockdown: Lessons From India’s Covid-19 Response And The Way Forward To Economic Survival”	Jointly by Department of Commerce, Malda College, Malda & Department of Commerce and Economics, Sivanath Sastri College, Kolkata
17 th June, 2020	“State-level Webinar Lecture Series on Indo-Chinese Relations in the Midst of Pandemic”	Department of Political Science, Gokhale Memorial Girls’ College
25 th June, 2020	One Day National Webinar On “The Great Role Of Botanists In Production Of High Quality Authentic Ayurvedic/Herbal Medicine”	Department of Botany, in collaboration with IQAC, Egra Sarada Shashi Bhusan College
30 th June, 2020	“ Recent Advances In Biology”	PG Department of Botany, Lady Brabourne College
2 nd & 4 th July, 2020	Frontiers In Biological Sciences (Chapter IV), an International Webinar on ‘Covid 19 – The Current Scenario’	Department of Microbiology, St. Xavier’s College (Autonomous), Kolkata in collaboration with IQAC, St. X Xavier’s College (Autonomous), Kolkata
9 th July 2020	One–Day International Teachers’ Workshop on “Forced Migration : Humanity at the crossroads”	Jointly by Departments of History and Political Science, Sivanath Sastri College and the Mahanirban Calcutta Research Group
15 th to 17 th July 2020	International Webinar on “ Transforming Education through Global Collaboration- The Roadmap”	Sinhgad Technical Education Society’s Sinhgad Institute of management, Pune
6 th August, 2020	One day webinar on “Intersectionality Between Gender, caste and Class : Genesis of Gender Violence in India”	Departments of Women Studies, History and political science, Sivanath Sastri College, Kolkata
6 th August, 2020	National Webinar on "Ethnobotanical Study of Traditional Knowledge: The Key to Better Future"	Jointly by: Department of Botany and IQAC, Vivekananda College, Thakurpukur
12 th – 15 th	Online Lecture series on “Virtual Journey	Department of Botany in collaboration with

August, 2020	through Botanical World”	IQAC, Taradevi Harakhchand Kankaria Jain College, Kolkata
14 th August 2020	Workshop on E-LMS	IQAC, Sivanath Sastri College, Kolkata
17 th August, 2020	National Webinar on MOOC and its importance in Higher Education	Education Department in collaboration with IQAC, Sivanath Sastri College, Kolkata
20-21 st August, 2020	Online Workshop on “How to use in Teaching and Administrative work in Higher Education Institutions	Education Department in collaboration with IQAC, Sivanath Sastri College, Kolkata
27 th October, 2020	National Webinar on Emerging Trends in Plant Research	Archana Sharma Foundation of Calcutta and Department of Botany, University of Calcutta
12 th December 2020	Biodiversity -14 webinar on “Biodiversity of Medicinal Plants in India and their Conservation	Flora and Fauna Asia Facebook Group, Department of Botany, Seva Bharati Mahavidyalaya, Kapgari, Jhargram, W.B. in collaboration with DRISHTICON organisation
2 nd January, 2021	Biodiversity -17 webinar on “Biodiversity under severe threats”	Flora and Fauna Asia Facebook Group, Department of Botany, Seva Bharati Mahavidyalaya, Kapgari, Jhargram, W.B. in collaboration with DRISHTICON organisation
13 th February, 2021	Biodiversity -23 webinar on “Plants in the tribal life in Arunchal Pradesh: A culture Panorama”	Flora and Fauna Asia Facebook Group, Department of Botany, Seva Bharati Mahavidyalaya, Kapgari, Jhargram, W.B. in collaboration with DRISHTICON organisation

Workshops/FDP/OP/RC attended

- a) As a resource person : nil
b) As a participant :

Workshops

Date	Workshops	Place
22-23 rd Jan., 2010	In the ‘Seminar-cum-workshop on the existing Syllabii of B.Sc. Hons. & General courses in Botany – jointly organised by the Undergraduate Board of Studies in Botany & Dept. of Botany	Dept. of Botany, University of Calcutta, Kolkata
10 th Dec. 2014	A workshop on Pain Management as a part of Women Health Awareness Programme – Initiative of Research Consultancy & Extension subcommittee of NAAC (By - Dr. Subrata Goswami Course Director, ESI Institute of Pain Management)	Sivanath Sastri College, Kolkata
13 th May 2016	IQAC Workshop on Quality of Teaching	Sivanath Sastri College, Kolkata
13 th May 2016	IQAC Workshop on Quality of Teaching	Sivanath Sastri College, Kolkata

20-21 st March 2018	Academic Administrators Workshop on “Administrative Reforms in Higher Educational Institutions : Perspective CBCS” By University Grants Commission, Human Resource Development Centre (UGC-HRDC)	University of Calcutta
3 rd May 2018	One day “Inter College Workshop on Choice Based Credit System” Organised by Sivanath Sastri College & Heramba Chandra College	South City College
12 th Sept. 2018	One day seminar on “ Sister Nivedita and Revitalization of Indian Culture” Organised by Departments of Bengali, Education, Philosophy & Sanskrit	Ramakrishna Mission Institute of Culture, Kolkata
27 th Sept. 2019	One day seminar and workshop on “ Revolutionary Journey of medicinal plants from ancient days to modern civilization ” - organized by the three departments of Sivanath Sastri College (viz. Dept. of Botany, Philosophy and Sanskrit) as a part of ongoing MRP	Sivanath Sastri College, Kolkata

OP and RC

Orientation / Refresher Course	Participation	Funding agency	From	To	Remarks
29 th Academic Staff Orientation Programme for University and College Teachers	Attended & completed the programme	UGC - sponsored	27.01.99	23.02.99	
Refresher Course in Botany (University of Calcutta, Dept. of Botany)	Attended & completed the programme	UGC - sponsored	27.02.01	21.03.01	
Refresher Course in Life Science (University of Calcutta, Dept. of Zoology)	Attended & completed the programme	UGC - sponsored	25.03.03	14.04.03	Awarded “A” Grade
Refresher Course in Life Science (University of Calcutta, Dept. of Botany)	Attended & completed the programme	UGC - sponsored	02.12.04	22.12.04	Awarded “A” Grade

SEMINARS / CONFERENCES ORGANISED

Date	Seminar & workshop	National/ Regional	Venue
6 th Feb. 2016	One day seminar on “SUNDERBANS- THE ENDANGERED ECOSYSTEM” – ORGANISED by Dept. of Botany & Geography, Muralidhar College, Kolkata in collaboration with Dept. of Botany, Sivanath Sastri College, Kolkata	UGC sponsored - State Level Seminar Attended & organised	Muralidhar College, Kolkata
18 th March 2016	One day seminar on “ Biodiversity of medicinal Plants & their uses ”(Resource person-DR. PRABIR RANJAN SUR)	Attended & organised	Sivanath Sastri College, Kolkata
27 th Sept. 2019	One day interdisciplinary seminar & workshop on IQAC sponsored project “REVOLUTIONARY JOURNEY OF MEDICINAL PLANTS FROM ANCIENT CIVILISATION TO MODERN DAYS”- organised by Dept. of Botany, Philosophy & Sanskrit.	Attended & organised	Sivanath Sastri College, Kolkata

UNIVERSITY & OTHER ASSIGNMENTS:

1. Assignments and other confidential work related to Examination offered by the Calcutta University.
2. As a **Resource Person** of five modules for MOOC course on **Botany** titled “**Plant Physiology and Metabolism**” – by **EMMRC** (Educational Multimedia Research Centre is a media Centre of University Grants Commission) St. Xavier’s College (Autonomous), 493, Ajaynagar, Kolkata - 700094, India which are developed and delivered for **SWAYAM in January-June 2020** semester, under CBCS structure.

Link address of Module
1. Module No. 17 = Anaerobic Respiration https://www.youtube.com/watch?v=46zMy11UDBQ&list=UUQynSbPmjTJIWmk_RvIYP0w&index=24
2. Module No. 37 = Photoperiodism https://www.youtube.com/watch?v=AX0tiOLJzEs&list=UUQynSbPmjTJIWmk_RvIYP0w&index=4
3. Module No. 38 = Phytochromes https://www.youtube.com/watch?v=LtcE2INxYsU&list=UUQynSbPmjTJIWmk_RvIYP0w&index=3
4. Module no. 39 = Photomorphogenesis and its application https://www.youtube.com/watch?v=od_VN54I2O4&list=UUQynSbPmjTJIWmk_RvIYP0w&index=2
5. Module No. 40 = Vernalization https://www.youtube.com/watch?v=kI8NZU-K26A&list=UUQynSbPmjTJIWmk_RvIYP0w