

Acknowledgements

We extend our gratitude to Hon'ble Chancellor and Vice-Chancellor for giving opportunity to conduct this Faculty Development Program in the Department of Zoology IASE (Deemed to be University), Sardarshahr.

The Faculty of Zoology is extremely thankful to the Registrar, IASE Deemed to be University, Dean (Education) and Dean (Faculty of Arts & Social Sciences) for entrusting and placing faith in the organizing committee providing required resources and all possible support.

Our gratitude to the experts in the field of Zoology. Their informative lectures, pictorial notes and resourceful examples encouraged participants to learn inductively.

We are thankful to the earnest and sincere attendees of this FDP who were not only our colleagues but the pursuers of scientific excellence.

We express our sincere thanks all the staff members of Education and Arts & Social Sciences for their timely and fruitful suggestions and supporting staff of the institute for assistance in the successful executing of the progress.

Learning is the eye of the mind

Introduction

FDP is the most important academic activity in the teaching profession. Today the profession of teaching has become quite challenging because of the latest technological development. The Trend in the teaching profession is in changing scenario and the faculty members are expected to be more effective in teaching, evaluating and research. Therefore, the present Faculty Development Programme (FDP) initiated and aimed to enhance the research skill of the faculties from College/University belongs to the broad disciplines of life sciences. Imparting intensive teaching and updating knowledge of latest research technology.

The Programme was attended by 53 participants from different College/University of different states. Attendees included research scholars and faculty members of varied disciplines of Zoology/Life Sciences.

Inaugural Session

The Programme started the lighting of lamp at Inaugural ceremony and singing the Sarswati Vandana.

Dr. Uma Saini in her welcome address, welcomed Prof. Ashok Kumar, Former Vice Chancellor Deendayal Upadhyay University Gorakhpur and Prof. Anil Chhangani, Head Department of Environmental Science, MGS University of Bikaner.

Prof. O.P. Jangir (Professor of Eminence) gave introduction of Faculty Development Programme and emphasizing the importance of such academic programs. He highlighted FDP in Life Sciences particularly within a Zoology Department and focused on : updating knowledge, promoting research and creating a platform for faculty to share experiences, learn from each other to build a strong academic community.

The Present report of the FDP covers the activities carried out during all the Technical Sessions ie. 1-14 and the Inaugural Session and Valedictory Session. Submitted further that this report covers the list of the different resource persons and persons remained there in different capacities as per the detail given with the respective sessions. The report of the each session further covers the title of the Technical Session, name of Resource Persons, Rapporteurs and the name of concluder of the sessions.

Note: Submitted that to avoid repetition the detail of the different sessions have been written with the respective session. Participants registered online.

Date: 17-03-25

Time: 10:00 AM

Day 1	Report of the Inaugural Session: March 17 th , 2025 Vanue: Smt. Shyama Jee Dugar Personality Devlopment Court	
Lighting of the Lamp	Resources Person, Dean(s), Faculty members, Research Scholars, Coordinator, Organizing committee members and Participants	05 Minutes
Institutional Geet	By the University Music Team and Audience	05 Minutes
Welcome Address & Introduction of the Resource Person	Dr. Uma Saini & Dr. Alpna Sharma	05 Minutes
FDP Introductory Note	Prof. O.P. Jangir, Coordinator	10 Minutes
Vote of Thanks	Dr. Pushpa, Organizing Secretary	05 Minutes
Morning Tea Break		







**FACULTY DEVELOPMENT PROGRAMME ON "EMERGING TRENDS OF RESEARCH
IN TISSUE ENGINEERING AND DEVELOPMENTAL BIOLOGY/LIFE SCIENCES"**

ORGANISED BY THE
DEPARTMENT OF ZOOLOGY, FACULTY OF SCIENCE
IASE (DEEMED TO BE UNIVERSITY), SARDARSHAHR (RAJASTHAN)
17 March to 23 March, 2025

Faculty Development Programme Schedule

17 March 2025

Session-I (10:00 am-11:30 am)

Institutional Prayer	By the University Music Team and Participants	0.05 Min.
Welcome Address & Introduction of the FDP	FDP Coordinator	0.10 Min.

Resource Person:	Prof. Ashok Kumar Cancer, a Preventable Epidemic? : Role of Life Style, Diet and Environment.	60 Min.
Rapporteur: Open Session	Dr. Pushpa Dr. Milan	15 Min.
Session-II (01:30 pm-03:00 pm)		
Resource Person:	Prof. Anil Chhangani Emerging Trends and Challenges of Biodiversity conservation and Management in Thar Desert	60 Min.
Rapporteur: Open Session	Prof. Shivam Dr. Ramavatar Godara	30 Min.

18 March 2025

Session-I (10:00 am-11:30 am)

Resource Person: Rapporteur: Open Session	Prof. R.K. Purohit Health Hazards of Mobile Phone radiation & Health Radiation Protection. Sh. Rajendra Prasad Prajapat Dr. Mahesh Kumar Sharma	60 Min. 30 Min.
Session-II (01:30 pm-03:00 pm)		
Resource Person: Rapporteur: Open Session	Prof. Pratap Kataria Ecological analysis of desert and its biodiversity. Dr. Mahesh Kumar Sharma, Sh. Bhagirath mal / Dr. Pushpa	60 Min. 30 Min.

19 March 2025

Session-I (10:00 am-11:30 am)

Resource Person: Rapporteur: Open Session	Prof. O.P. Jangir Somatic cell Plasticity and Vitamin A: “ Past, Present & Future Prospects Prof. Shivam Chaturvedi Dr. Dharmendra	60 Min. 30 Min.
Session-II (01:30 pm-03:00 pm)		
Resource Person: Rapporteur: Open Session	Prof. K.C. Soni How to study ecology and behavior of a bird, Black ibis as model or Egyptian vulture as a model. Dr. Pushpa Dr. Rajpal Yadav	60 Min. 30 Min.

20 March 2025

Session-I (10:00 am-11:30 am)

Resource Person:	Dr. Ghanshyam Kachhawa Molecular analysis of insects by DNA Barcoding.	60 Min.
Rapporteur: Open Session	Dr. Pushpa Dr . Rajendra Parsad	30 Min.
Session-II (01:30 pm-03:00 pm)		
Resource Person:	Prof. A.K. Purohit Institutional animal ethical committee (IAEC). Rules and its significance	60 Min.
Rapporteur: Open Session	Dr. Mahesh Kumar Sharma Dr. Rajpal Yadav	30 Min.

21 March 2025

Session-I (10:00 am-11:30 am)

Resource Person:	Prof. P.J. John Plastics and Microplastics : A Global Threat to Biodiversity and Health.	60 Min.
Rapporteur: Open Session	Dr. Ramawatar Sh. Surendra Kumar	30 Min.
Session-II (01:30 pm-03:00 pm)		
Resource Person:	Prof. S.C. Joshi Rabbit as suitable model for atherosclerosis and cardiovascular research	60 Min.
Rapporteur: Open Session	Dr. Pushpa Dr. Sushmita	30 Min.

22 March 2025

Session-I (10:00 am-11:30 am)

Resource Person:	Dr. Vandana Nunia Machine Learning in Cancer Deduction.	60 Min.
Rapporteur: Open Session	Dr. Pushpa Dr. Milan	30 Min.
Session-II (01:30 pm-03:00 pm)		
Resource Person:	Dr. Samit Chatterjee Molecular Imaging for Immunotherapy and Targeted Therapy in Cancer.	60 Min.
Rapporteur: Open Session	Prof. Shivam Dr. Mahesh Kumar Sharma	30 Min.

23 March 2025

Session-I (10:00 am-11:30 am)

Resource Person:	Prof. M.M. Ranga Environmental Threats to Biodiversity and its mitigation measures.	60 Min.
Rapporteur: Open Session	Dr. Mahesh Kumar Sharma Dr. Ramawatar	30 Min.
Session-II (01:30 pm-03:00 pm)		
Resource Person:	Prof. Praveen Goswami Emerging Technologies in the field of life sciences.	60 Min.
Rapporteur: Open Session	Dr. Pushpa Dr. Dharmendra	30 Min.

Proposal for Faculty Development Programme
(Department of Zoology)

Title: "Emerging Trends of Research in Tissue Engineering and Developmental Biology/Life Sciences"

Organized by: Department of Zoology, IASE (Deemed to be University) Sardarshahar

Duration: 17 March to 23 March, 2025 (One Week Programme)

Mode: Online & Offline (Hybrid) / Discussion / Lecture Method.

Venue: Smt. Shayama Jee Dugar, PDC Hall IASE

Objective: The Faculty Development Programme (FDP) is designed to enhance the knowledge, of the subject and innovative recent researches.

Key objectives:

1. To foster interdisciplinary research and innovation in Tissue Engineering, Developmental Biology and Other life science disciplines .
2. To highlight the future avenues of tissue regeneration combining developmental biology.
3. To highlight the somatic cell plasticity.
4. To understand the detail mechanism of animal development.
5. To highlight on embryonic morphogenesis and differentiation.
6. To improve teaching of Research methodology by using innovative techniques.
7. To highlight on the future scope of Life Science discipline in professional aspects.

The proposed Faculty Development Programme on “Emerging Trends of Research in Tissue Engineering and developmental Biology/Life sciences” with the vision of fostering academic excellence and promoting recent scientific skills among faculty members. We are confident that this initiative will significantly benefit participants and contribute to the institution’s academic and research objectives.

FDP Proposed Budget:

S.No	Particulars	Amount
1	Remuneration for Resource Persons(2000/- Per Lecture)	28,000/-
2	Travelling Expenses	30,000/-
3	Resource Material	5,000/-
4	Technical Setup	2,000/-
5	Refreshment	5,000/-
6	Contingency	5,000
Total		75,000/-

(Prof. O.P. Jangir)

Programme Coordinator

Department of Zoology



INSTITUTE OF ADVANCED STUDIES IN EDUCATION

(Deemed to be University)

Gandhi Vidya Mandir, Sardarshahr – 331403 (Rajasthan)

e.mail. : info@iaseuniversity.org.in, URL : iaseuniversity.org.in, toll free : 1800 3000 8151

IASE-DU/SRDR/2025/ 570

दिनांक: 20 फरवरी 2025

प्रतिष्ठा में,

श्रीमान संयुक्त निदेशक (अकादमिक)
आयुक्तालय कॉलेज शिक्षा,
राजस्थान, जयपुर।

विषय:—विश्वविद्यालय में विभिन्न विषयों में आभासी माध्यम से Faculty Development Programme (FDP) में प्रतिभागियों (महाविद्यालयों के शिक्षकों) के भाग लेने की स्वीकृति बाबत।

महोदय,

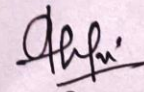
उपर्युक्त विषयान्तर्गत निवेदन है कि आई.ए.एस.ई. मानित विश्वविद्यालय सरदारशहर चूरु द्वारा विभिन्न विषयों में ऑनलाईन माध्यम से Faculty Development Programme आयोजित किये जा रहे हैं, जो निम्न प्रकार हैं—

क्र. सं.	विषय	दिनांक
1	Education	01.03.2025 से 07.03.2025
2	Zoology	17.03.2025 से 23.03.2025
3	Chemistry	17.03.2025 से 23.03.2025
4	Sanskrit	24.03.2025 से 31.03.2025
5	Geography	17.04.2025 से 23.04.2025

उपरोक्त विभिन्न विषयों में FDP, व्यवसायिक कुशलता की दृष्टि से किये जा रहे हैं। अतः आपसे सादर निवेदन है कि इस Programme में भाग लेने वाले महाविद्यालयों के शिक्षकगणों को प्रतिभागी के रूप में आभासी माध्यम (Online) से भाग लेने की आवश्यक स्वीकृति जारी करने की कृपा करें।

आभार

संलग्न – FDP की विवरणिकाएँ (Brochure)


रजिस्ट्रार
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Resource Persons:

- **Prof. Ashok Kumar**
Former Vice Chancellor, Deendayal Upadhyay, Gorakhpur University, Gorakhpur
- **Prof. S.C.Joshi**
Former President (Vice Chancellor), Lords University, Alwar8
- **Prof. Anil Chhangani**
Head Deptt. Of Environmental Science
MGS, University, Bikaner
- **Prof. A.K Purohit**
Retd. Prof. B50 Krishna Nagar, Jodhpur
- **Prof. P. J. Johan**
Dean Faculty of Science
IIS (Deemed to be University) Mansarovar, Jaipur-302020
- **Prof. R. K. Purohit**
Principal, Dungar College, Bikaner
- **Prof. M.M Ranga**
Retd. Professor, Sant Gahira Guru Vishwavidyalaya
Ambikapur, Chhattisgarh
- **Prof. Pratap Kataria**
Head Department of Zoology, P.G Govt Dungar College, Bikaner
- **Prof. K.C Soni**
Retd. Prof. B5 Padma Niketan Near Pani ki Tanki
Agarsen Nagar, Churu-331001
- **Dr. Vandana Nunia**
Department of Zoology, University of Rajasthan, Jaipur
- **Prof. Praveen Goswami**
Principal, Poddar International College, Affiliated to UOR, Jaipur
- **Dr. Ghanshyam Kachhawan**
Department of Zoology, University of Rajasthan, Jaipur
- **Dr. Samit Chatterjee**
Department of Zoology, University of Rajasthan, Jaipur

Institute of Advanced Studies in Education (Deemed to be University)

Gandhi Vidya Mandir, Sardarshahr, Dist- Churu (Raj)

organizing

Faculty Development Programme

on

EMERGING TRENDS OF RESEARCH IN TISSUE ENGINEERING AND DEVELOPMENTAL BIOLOGY/LIFE SCIENCES

(17th March 2025 to 23rd March 2025)

Registration

1. **Registration open:** 01 February to 10 March, 2025
2. **Registration Link:** Google Registration Form.
3. **Registration Fee:** Rs.-100/- (One Hundred Rupees) Complete attendance is mandatory otherwise certificate will not be issued.

Registration Form

Name

Designation

College:.....

Branch:.....

Address:.....

Whatsapp Mobile No:.....

E-Mail:.....

Category:Academic/Industry/Others

Signature of the Participants:.....

Date..... Place.....

Registration Link- <https://www.iaseniversity.org/in/seminar/conference/workshop/FDP>



One Week Faculty Development Programme

(17 March 2025 to 23 March 2025)

ORGANIZED BY

DEPARTMENT OF ZOOLOGY

IASIE (DEEMED TO BE UNIVERSITY)

SARDARSHAHR (CHURU), RAJASTHAN



Chief Patron

Shri Kanak Mal Dugar

Chancellor, IASE (Deemed to be University)

Gandhi Vidya Mandir, Sardarshahr



Patron

Prof. B.L. Sharma

Vice Chancellor, IASE (Deemed

to be University) Gandhi Vidya

Mandir, Sardarshahr



Coordinator

Prof. O.P. Jangir

Dean, Faculty of Science, IASE

(Deemed to be University) Gandhi

Vidya Mandir Sardarshahr

Institute of Advanced Studies in Education
(Deemed to be University)

Gandhi Vidya Mandir, Sardarshahr

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EMERGING TRENDS OF RESEARCH IN TISSUE ENGINEERING AND DEVELOPMENTAL

BIOLOGY/LIFE SCIENCES

Co-Coordinator

Prof. V.K. Swami

IQAC Coordinator & Dean, Faculty of

Pharmacy

IASIE (Deemed to be University)

Sardarshahr

Organizing Secretary

Dr. Puraram Meghwal

Dr. Kailash Pareek

Dean, Faculty of Education

Dean, Faculty of Arts & Social

Mob- 9636705124

Science Mob- 9413889171

Organizing Committee Member

Dr. Pushpa

Dr. Mahesh Sharma

Assistant Professor

Assistant Professor

Mob. 8058698069

Mob. 7357573985

About the FDP

The Faculty Development Program (FDP) is a structured initiative designed to empower educators, researchers, and academic professionals with the skills, knowledge, and insights they need to excel in their respective domains. FDPs play a crucial role in enhancing the quality of teaching, research, and institutional effectiveness by providing faculty members with exposure to the latest trends, methodologies, and tools in education and industry.

The primary objectives of FDP include:

1. **Skill Enhancement:** Equipping faculty members with innovative pedagogical techniques, digital tools, and advanced research methodologies.
2. **Knowledge Upgradation:** Providing exposure to emerging trends, multidisciplinary approaches, and evolving subject matter relevant to their fields.
3. **Professional Growth:** Encouraging a culture of lifelong learning, collaboration, and innovation among educators.
4. **Networking Opportunities:** Creating a platform for faculty members to exchange ideas, share experiences, and collaborate on academic and research projects.

Typically, FDPs cover a wide range of topics, including:

- Outcome-based education and curriculum development
- Pedagogical innovations
- Research methodologies and publishing practices
- Emerging technologies and their integration into education
- Soft skills, leadership, and career advancement for educators

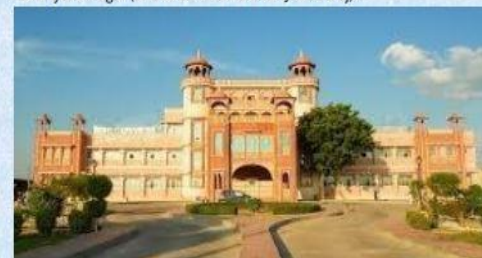
The Faculty Development Programme aims to achieve the following:

Expected Outcomes of the FDP

- Enhanced teaching skill and improved content knowledge among faculty members.
- Expansion of interdisciplinary research in Biological sciences.
- Development of innovative aim and method for experimental teaching work.
- Development of emerging trends in innovative researches.

About the University

The Institute of Advanced Studies in Education (Deemed to be University) has a proud past stretching back to 1950 when the petite Gandhi Vidya Mandir, parent Institution, was established in the midst of rural barren desert land Sardarshahr. From its inception with handful of students, the institution slowly grew into a giant tree which at present imparts education from primary to post-doctoral level. It has survived many ups and downs and emerged as a public university in 2002, where it got the formal recognition of Deemed to be University, under section 3 of the UGC Act 1956. Today, the university is a vibrant centre in research and academics as it embraces its root as a value-based institution. The Institute of Advanced Studied in Education (Deemed to be University) (hereafter IASE) is an institution born out of dedication of the founder Shri Kanhaiyalal Dugar (Swami Shri Ramsharan Ji Maharaj).



He was an embodiment of universal humanism with higher vision and dedication. His vision was inspired by Mahatma Gandhi and he believed in non-violence and universal brotherhood. He had dedicated entire life for betterment of society, expansion of education and for upliftment of the downtrodden in Sardarshahr. This includes Arts, Social Science, Humanities, Science, Education & Pharmacy. Right since its inception the vision of the institute has been to impart quality education inculcate moral value and to be good and sensible citizens.

Format of Invitation Letter



Institute of Advanced Studies in Education

(Deemed to be University)

Gandhi Vidya Mandir, Sardarshahr – 331403 Distt. Churu (Rajasthan)
E-mail:- foeducationiasedu@gmail.com, website- www.iaseducation.org.in

IASE/FOE/25/PB/

Prof. S.C. Joshi
170, Vishwakarma Nagar
1, Maharani Farm, Durgapura
Jaipur-302018

Subject: Invitation to Serve as a Resource Person for the Faculty Development Programme (FDP)

Respected Sir,

We feel immense pleasure to inform you that the Department of Zoology, Faculty of Science is organizing the **Faculty Development Programme (FDP)** on the topic entitled "Emerging Trends of Research in Tissue Engineering and Developmental Biology/Life Sciences" from March 17 to March 23, 2025 at its campus.

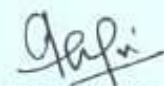
The Department feels privileged to extend you an invitation to act as **Resource Person** for this programme. Your expertise and significant contribution in the subject would greatly benefit the faculty members in enhancing their teaching and research capabilities.

We kindly, request you to deliver a session on "**Rabbit as suitable model for atherosclerosis and cardio vascular research**" on 21 March 2025 at 1:30 to 3:00 pm. The session is expected to be 90 minutes followed by an interactive Q & A session.

Your participation will be undoubtedly enrich the programme. Please spare your valuable time to grace this programme and join us online with your benign presence.

Best regards

Date
Place: IASE (Deemed to be) University
Sardarshahr, Rajasthan


(Prof. O.P. Jangir)
FDP, Co-ordinator
Mob. 9414540136

List of Participants

FACULTY DEVELOPMENT PROGRAMME IN ZOOLOGY PARTICIPANTS LIST

S.NO	PARTICIPANTS NAME	EMAIL ID	SUBJECT	ADDRESS	TRANSACTION NUMBER
1	Dr YASMIN KHANAM	yasminkhanam7@gmail.com	ZOOLOGY	Govt. NM College Hanumangarh	
2	Prakash Chandra acharya	pca3402c@gmail.com	ZOOLOGY	Govt. Dungar college	
3	Rajesh kumar	rk24540@gmail.com	ZOOLOGY	IASE DEEMED TO BE UNIVERSITY SARDARSHAHAR	544128340775
4	VIKRAM SINGH MEENA	vikramsahra22@gmail.com	ZOOLOGY	Pandit DEENDAYAL UPADHYAY SHEKHAWATI UNIVERSITY SIKAR	507174886219 VIA PAYTM
5	Dr.Yogita Chhangani	ychhangani03@gmail.com	ZOOLOGY	Lachoo Memorial College of Science and Technology(Autonomous), Jodhpur	507176540742
6	Dr. MOHITA MATHUR	sonumohita@gmail.com	ZOOLOGY	LACHOO MEMORIAL COLLEGE OF SCIENCE & TECHNOLOGY, AUTONOMOUS, JODHPUR	507132129191
7	Dr.Ranjeeta Mathur	mathur.ranjeeta77@gmail.com	ZOOLOGY	Lachoo Memorial College of Science and Technology, Jodhpur	507132107368
8	Dr Sunita Goyal	goyalsunita977@gmail.com	ZOOLOGY	Lachoo Memorial college of science and technology,jodhpur	507172112460
9	Dr.saroj rathore	sarojrathore65@gmail.com	ZOOLOGY	Swami vivekanand college for professional studies sinthai bikaner	
10	Dr. Ramawatar Godara	ramawatargodara@gmail.com	ZOOLOGY	Institute of Advanced studies in Education (Deemed a be University)	230159835958
11	VIKRAM SINGH MEENA	vikramsahra22@gmail.com	ZOOLOGY	Pandit DEENDAYAL UPADHYAY SHEKHAWATI UNIVERSITY SIKAR	
12	Amit Nagal	amitkumarnagal@gmail.com	ZOOLOGY	EY IT services	upi id 101306903701
13	Dr. Surender kumar	surender.saharan1@gmail.com	ZOOLOGY	Sri Guru Nanak girl's P. G. College	T2503101744092570468865
14	Dr. Jagdish Prasad	jpzooology@yahoo.com	ZOOLOGY	Smt Rukmani Devi Ramdev Ladha Govt PG College Nawa city	T2503092101477185803893
15	Bhawani Shankar	bspareek0021@gmail.com	ZOOLOGY	SBD GOVT. COLLEGE, SARDARSHAHAR	506813823627
16	Dr. A. Anancia Grace	gracepapu92@gmail.com	ZOOLOGY	Fatima College	T2503062314442826574941
17	Gajanand Saini	gajanandsaini9352@gmail.com	ZOOLOGY	Other	506577732475
18	Dr.preeti soni	drpreetisoni29@gmail.com	ZOOLOGY	J.n.v.u jodhpur (guest faculty)	
19	Dr. Deep Mala	deepmala.garg.25@gmail.com	ZOOLOGY	Agrwal Girls College	543041080888
20	Anil kumar Dadrich	anildadrich548@gmail.com	ZOOLOGY	S.K.Govt.Girls College	T2503051250440812840276
21	Dr. Mahesh Kumar Sharma	mahesheduiaae@gmail.com	ZOOLOGY	faculty of education, iase (deemed to be) university, gvm, sardarshahar	T250305104953798017479
22	Ravina	ravinasoni485@gmail.com	ZOOLOGY	N.m.pg college hanumangarh, rajsthan, india	117810
23	Dr. Nidhi Shekhawat	nidhi14sakar@gmail.com	ZOOLOGY	Brightmoon Girls College, Govindgarh, Jaipur (Raj.)	UTR No. 518084921563
24	Dr.Anil kumar soni	dr.anilsoni1@gmail.com	ZOOLOGY	SETH GL BIHANI SD PG COLLEGE SRIGANGANAGAR	
25	Dr. D. P. Jangir	dp_jangir2003@yahoo.com	ZOOLOGY	IASE (Deemed to be) University Sardarshahar	506024467733
26	Dr. Natwar Singh	nsnagar@gmail.com	ZOOLOGY	R. D. Govt. Girls College, Bharatpur	44657232919
27	Aayushi Karwa	aayushikarwa@yahoo.in	ZOOLOGY	Seth G.L. Bihani S.D. (P.G.) College	
28	Dr. Pushpa	pushpabhadu84@gmail.com	ZOOLOGY	IASE (Deemed to be) University Sardarshahar	542482081906
29	Manish Kumar Sharma	manishkumarsharma.bkn@gmail.com	ZOOLOGY	Iase sardarshahar	T2502271945320272143204

30	Dr IQBAL SINGH	iqbal.singh.sgnr@gmail.com	ZOOLOGY	Dr Bhim Rao Ambedkar Govt College	505860971086
31	Manoj Kumar Sharma	mkdhandh16@rediffmail.com	ZOOLOGY	Vinayak Girls PG College Fatehpur Shekhawati	
32	Dr Uma salni	yashgour2010@gmail.com	ZOOLOGY	Faculty of education, IASE Deemed to be University Sardarshahar Churu Rajasthan India	389378645427
33	Dr.Kulraj Vyas	anandvyas2016@gmail.com	ZOOLOGY	IASE Deemed to be University,Sardarshahar	708984003774
34	Monika Vig	meetvidhu@gmail.com	ZOOLOGY	NPS SriGanganagar	505121915564
35	Jainender Bhati	jainenderbhati@gmail.com	ZOOLOGY	Seth G.L. Bihani S.D.P.G. College	505121915272
36	Jyoti Rathore	jrathore326@gmail.com	ZOOLOGY	Shri khushal Das University	T2502201716269880847348
37	Sajjan kumar Darji	sangmoyal@gmail.com	ZOOLOGY	Smt. Kamla devi Gauridutt Mittal mahila Mahavidyalaya Sardar shahar	T2502191551547435601759
38	Dr Saroj Chahar	chaharsaroj34@gmail.com	ZOOLOGY	Smt Kamla Devi Gurudutt Mittal Mahila Mahavidyalaya Sardarshahar	UPI 541779756139
39	Dr.meenakshi Tanwar	tanwar.meenakshi11@gmail.com	ZOOLOGY	Smt. Kamla Devi Gauridutt Mittal Mahila Mahavidyalaya Sardarshahar Churu	UPI 541616803619
40	Sandeep	sp0728559@gmail.com	ZOOLOGY	IASE Deemed to be university sardarshahar, Churu (raj.)	626
41	Abhinav Singh	singhabhinavnv@gmail.com	ZOOLOGY	Pandit Deendayal Upadhyaya Shekhawati University, formerly Shekhawati University	
42	Jyoti	JYOTIPOONIA2007@gmail.com	ZOOLOGY	Institute of advanced studies in education	100
43	kanchan	kanchankhina2005@gmail.com	ZOOLOGY	institute of advanced studies in education	9784855130
44	Jyoti	JYOTIPOONIA2007@gmail.com	ZOOLOGY	Institute of advanced studies in education	
45	Preeti Toonwal	toonwal.preeti@gmail.com	ZOOLOGY	Smt. Kamla Devi. Gauridatt Mittal Mahavidhyalaya, Sardarshahar 331403	14513164017
46	Dr. Swati Ojha	swatiohajoshi@rediffmail.com	ZOOLOGY	Shri Khushal Das University Hanumangarh	T2502181000357764210797
47	Neha tiwari	vasudevkrishn108@gmail.com	ZOOLOGY	IASE DEEMED TO BE UNIVERSITY	504881874173
48	Aarti Bishnoi	aartibishnoi70@gmail.com	ZOOLOGY	Shri kushal das university	504655730477
49	Manisha Agarwal	visheshagarwal003@gmail.com	ZOOLOGY	Government dungar college	T2502151405185556485083
50	Durga khemka	durgakhemka773@gmail.com	ZOOLOGY	Gandhi vidhya mandir sardarsahar	

CERTIFICATE FORMAT

INSTITUTE OF ADVANCED STUDIES IN EDUCATION
(Deemed to be University), Sardarshahr

 **IASE**
(deemed to be university)

FACULTY DEVELOPMENT PROGRAMME IN ZOOLOGY

17th to 23rd March, 2025 S.No.003

Certificate of Appreciation

Presented to

Prof/Dr.....**PARTAP.SINGH**.....

For imparting your expertise and significant contribution in the subject as the **Resource Person** during the Seven Day **Faculty Development Programme** (March 17 to 23, 2025) organized by the Department of Zoology, IASE Deemed to be University, Sardarshahr. Your insightful discourse and guidance inspired faculty members and research scholars and contributed greatly to the FDP success.


Prof. O.P Jangir
FDP Coordinator



INSTITUTE OF ADVANCED STUDIES IN EDUCATION
(Deemed to be University), Sardarshahr

 **IASE**
(deemed to be university)

FACULTY DEVELOPMENT PROGRAMME

17th to 23rd March, 2025 S.No.

Certificate of Participation

This is to certify that Prof/Dr.....**PARTAP.SINGH**.....from.....**DUNGAR COLLEGE, BIKANER**.....has participated and acted as **Resource Person**. The **Faculty Development Programme** on "**Emerging Trends of Research in Tissue Engineering and Developmental Biology/Life Sciences**" organized by the Department of Zoology, Faculty of Science, IASE (Deemed to be University) Sardarshahr held during 17th March to 23rd March 2025.


Prof. O.P Jangir
FDP Coordinator



REPORT ON THE PROCEEDINGS

DAY 1

(17-03-2025)

Session- I: Morning Session (10:00 AM – 11:30 AM)

Prof. Ashok Kumar (Resource Person)	Cancer, a preventable Epidemic: Role of life Style, Diet and Environment	50 Minutes
Introduction of Resource Person	Dr. Uma Saini	05 Minutes
Open Session	Participants	10 Minutes
Rapporteur(s)	Dr. Pushpa & Dr. Milan Berman	

Dr. Uma Saini requested to the Resource Person Prof. Ashok Kumar and call him for his presentation.

Prof. Ashok Kumar delivered a lecture on “Cancer, a preventable Disease ? : Role of life Style, Diet and Environment he began by extending his best wishes to the new faculty members and expressing hope for their student’s success. Cancer, a word that evokes fear and dread, remains a leading cause of death worldwide, second only to heart disease, accounting for one in every four deaths. While genetic predispositions play a role, Prof. Kumar emphasized that lifestyle modifications, diet and environmental awareness can significantly reduce cancer risk. He highlighted how rapid industrialization and changing societal habits and increased sedentary lifestyle, contributing to cancer proliferation. In contrast regular exercise strengthens the immune system, regulates hormones and reduces inflammation, all of which play a crucial role in cancer prevention.

Diet is another cornerstone of cancer prevention. Prof. Kumar pointed out that Western dietary habits, high in processed meats, saturated fats and sugar have been linked to colorectal, breast and prostate cancers. Conversely a plant based diet rich in fruits, vegetables and whole grains provides essential

antioxidants Vitamins and minerals that protect cells from damage and inhibit tumor growth.

Long term exposure to carcinogens, including asbestos, radon, air pollution, ultraviolet radiation and secondhand smoke significantly heightens cancer risks.

Encouraging awareness, he urged individuals to adapt health habits, early detection strategies and preventive healthcare measures to combat the disease. Ultimately, while cancer may not be entirely avoidable, the power to mitigate its impact lies in our hands, making education, research and public health policies essential in striving toward a healthier future.

Rapporteur(s)

Dr. Pushpa

Dr. Milan Berman

At the end of the session, Dr. Pushpa extended vote of thanks to Prof. Ashok Kumar for his informative lecture. Professor O. P. Jangir expressed his gratitude, acknowledging the valuable contributions made during the session.

DAY 1

17-03-2025

Session II: Afternoon Session (01:30 PM – 03:00 PM)

Prof. Anil Chhangani (Resource Person)	Emerging Trends and Challenges of Biodiversity conservation and Management in Thar Desert	60 Minutes Online
Introduction of Resource Person	Dr. Alpna Sharma	05 Minutes
Open Session	Participants	25 Minutes
Rapporteur(s)	Prof. Shivam Chaturvadi & Dr. Dharmendra	

Dr. Alpna Sharma requested to the Resource Person Prof. Anil Chhangani and call him for his presentation.

Prof. Chhangani put his entire focused on biodiversity in which, he said that due to development of, new creation is happening in the name of creative construction but with this construction, species of diverse beings are becoming extinct with great intensity, which is a worrying aspect for human system, In the order of the extinction of various creatures and flora of the Thar Desert on the first 40% of the land from the Northwest to the Southwest of Rajasthan. As such as Solar panel innovation, trees of innumerable species are being cut from the ground, due to this the temperature is rising, The habitat and food opportunities of wild animals are rising and the mechanisms of a situation which is made from the incense to the case, the disturbance is coming and continuously is now being protected by biodiversity. Birds dying by colliding with turbines of high wind energy and wandering from the polar region and crossing the Aravile hills and wandering the paths of birds going to the sanctuary, they are absorbed in the cheeks of death, there is no doubt from pesticides, but the yield of pesticides is increasing, but the yields of the crops are increasing with the produce of artificial manure and pesticide. There are various distortions that are causing.

In its overall solution, Prof. Chhangani revealed that solar panel should be applied on Cannals surface. Or a solar panel should be placed on the roofs of the houses and the electric power should not be made with bare wires.

He focused on emerging threat to the Thar Desert Ecosystem. He explained solar energy projects are being implemented in the TD to harness renewable energy. However, the large-scale installation of solar plants can lead to habitat fragmentation, land use changes, and potential disturbance to local flora and fauna. Habitat destruction and Trees Cutting, deforestation, habitat destruction, and unsustainable land use practices lead to the loss of vegetation cover and degradation of the desert ecosystem. This not only reduces carbon sequestration but also contributes to soil erosion, desertification, and loss of habitat for native species. Change in Agriculture Land Use Pattern: Shifts in agricultural practices, such as increased irrigation and monoculture farming, impact the water balance and soil fertility in the region. Changes in land use patterns can disrupt traditional agricultural systems and exacerbate the vulnerability of local communities to climate change. He further though light on the balancing Green energy and resource conservation. Balancing the need for clean energy with responsible resource management is a complex challenge, but it's vital to ensure the long term sustainability of renewable energy project in environmentally sensitive region.

Rapporteur(s)

Prof. Shivam Chaturvadi

Dr. Dharmendra

At the end of the session, Dr. Pushpa extended vote of thanks to Prof. Anil Chhangani for his informative lecture. Professor O. P. Jangir expressed his gratitude, acknowledging the valuable contributions made during the session.

DAY 2

18-03-2025

Session-I : Morning Session (10:00 AM – 11:30 AM)

Prof. R.K. Purohit (Resource Person)	Health Harzards of Mobile Phone Radiation & Herbal Radiation Protection	60 Minutes online
Introduction of Resource Person	Dr. Pushpa	05 Minutes
Open Session	Participants	25 Minutes
Rapporteur(s)	Dr. Rajender Prasad Prajapat & Dr. Mahesh Kumar Sharma	

Dr. Pushpa requested to the Resource Person Prof. R.K. Purohit and call him for his presentation.

Prof. Purohit explained that mobile phones emit radiofrequency (RF) radiation in the form of non-ionizing electromagnetic waves. While RF radiation is generally considered less harmful than ionizing radiation (like X-rays), prolonged and excessive exposure may lead to health issues, including: Increased Cancer Risk, Brain Function and Cognitive Effects, Sleep Disturbances, Fertility Issues, Cardiovascular and Neurological Impact, Electromagnetic Hypersensitivity (EHS) and effects on birds and animals.

Prof. Purohit further through highlighted on the Herbal Radiation protection by using herbal sources. He explained the robe positive role of 1. Tulsi, Ginkgo Biloba, Ashwagandha, Turmeric, Green Tea and Aloe Vera.

Rapporteur(s)

Dr. Rajender Prasad Prajapat

Dr. Mahesh Kumar Sharma

At the end of the session, Dr. Pushpa extended vote of thanks to Prof. R.K. Purohit for his informative lecture. Professor O. P. Jangir expressed his gratitude, acknowledging the valuable contributions made during the session.

DAY 2

18-03-2025

Session-II: Afternoon Session (01:30 PM – 03:00 PM)

Prof. Pratap Kataria (Resource Person)	Ecological Analysis of Desert and its Biodiversity	60 Minutes Online
Introduction of Resource Person	Dr. Pushpa	05 Minutes
Open Session	Participants	25 Minutes
Rapporteur(s)	Dr. Mahesh Kumar Sharma & Dr. Pushpa	

Dr. Pushpa requested to the Resource Person Prof. Pratap Kataria and call him for his presentation.

Prof. Pratap Kataria highlighted the understanding of Biodiversity of the Thar Desert of Rajasthan. Prof. Singh began his lecture by explaining the ecological significance of the Thar Desert, which, despite being one of the smallest deserts in the world, is remarkably rich in fauna and flora. Some of the key facts highlighted during the session were The Thar Desert has a high population density, The region supports a rich variety of wildlife.

Rajasthan is not only a biodiversity hotspot but also India's largest milk-producing state, owing to its extensive livestock population, which coexists with the desert's unique ecological system.

Over the last few decades, major environmental transformations have taken place in the Thar Desert due to climate change and human interventions. Two primary factors influencing these changes are: Global Climate Change and Indira Gandhi Canal Network.

The session also covered the alarming decline of desert-adapted birds, which are struggling to survive in the changing environment. Some of the species facing habitat loss and competition include: Bustards, Wheatears, Sandgrouses, Houbras.

Prof. Singh stated that immediate scientific intervention is required to safeguard the delicate ecological balance of the Thar Desert. He outlined several key strategies for biodiversity conservation and sustainable ecosystem management, which include: Habitat Protection: Establishing protected areas and wildlife reserves to prevent further degradation of critical habitats.

Rapporteur(s)

Dr. Mahesh Kumar Sharma

Dr. Pushpa

At the end of the session, Dr. Pushpa extended vote of thanks to Prof. Pratap Kataria for his informative lecture. Professor O. P. Jangir expressed his gratitude, acknowledging the valuable contributions made during the session.

DAY 3

19-03-2025

Session-I: Moring Session (10:00 AM – 11:30 AM)

Prof. O.P. Jangir (Resource Person)	Somatic cell Plasticity and Vitamin A: "Past, Present & Future Prospects	60 Minutes online
Introduction of Resource Person	Dr. Uma Saini	05 Minutes
Open Session	Participants	25 Minutes
Rapporteur(s)	Prof. Shivam Chaturvadi & Dr. Dharmendra	

Dr. Uma Saini requested to the Resource Person Prof. O.P. Jangir and call him for his presentation.

On the third day of the Faculty Development Program, an enlightening session was conducted by Professor O.P. Jangir on the topic "Somatic Cell Plasticity and Vitamin A: Past, Present & Future Prospects." The session provided an in-depth understanding of somatic cell plasticity, emphasizing its significance in tissue development, repair, and potential therapeutic applications.

Professor Jangir began by defining somatic cell plasticity as the ability of cells to alter their phenotypes or transform into different cell types. This inherent characteristic plays a crucial role in maintaining tissue function and facilitating regeneration following injury or damage. He highlighted that this cellular adaptability is essential for compensating for the loss of systemic functions.

A significant part of the lecture focused on the role of Vitamin A and its derivatives, known as retinoids, in influencing somatic cell plasticity. Through extensive experimental studies, Professor Jangir demonstrated how exogenous Vitamin A affects the regenerative capabilities of various organs such as limbs, lens, cornea, and heart in species like toads, frogs, mice, rabbits, and pigs. Notably, Vitamin A was shown to induce transdifferentiation of the pineal gland into a median "third eye" in anuran toad tadpoles. Additionally, it facilitated the homeotic transformation of injured tail tissue into limbs in *Bufo melanostictus* tadpoles.

The lecture further explored the promising implications of these findings in regenerative medicine. Professor Jangir emphasized the potential for leveraging somatic cell plasticity for therapeutic purposes, particularly in neuron regeneration, bone and organ repair, and muscle damage treatment. These insights pave the way for the development of cell-based therapies, with the possibility of commercial applications in the near future.

The session concluded with an engaging Question & Answer segment, where participants discussed the challenges and future directions in the field of somatic cell plasticity research. Professor Jangir's comprehensive presentation was highly appreciated for its clarity and depth, inspiring participants to explore further research in this innovative domain.

Overall, the third day of the Faculty Development Program provided valuable insights into the transformative potential of Vitamin A in regenerative medicine, fostering a deeper understanding of cellular plasticity and its future prospects in therapeutic advancements.

Rapporteur(s)

Prof. Shivam Chaturvadi

Dr. Dharmendra

At the end of the session, Dr. Pushpa extended vote of thanks to Prof. O.P. Jangir for his informative lecture.

DAY 3

19-03-2025

Session-II: Afternoon Session (01:30 PM – 03:00 PM)

Prof. K. C. Soni (Resource Person)	How to Study ecology and behavior of a bird, Black ibis as Model	60 Minutes Online
Introduction of Resource Person	Dr. Alpna Sharma	05 Minutes
Open Session	Participants	25 Minutes
Rapporteur(s)	Dr. Rajpal Yadav & Dr. Pushpa	

Dr. Alpna Sharma requested to the Resource Person Prof. K. C. Soni and call him for his presentation.

Prof. Soni discussed various aspects of the Black Ibis's life cycle, including foraging techniques, breeding patterns, nest construction, and post-fledgling development. The key findings shared were: the study focused on two breeding seasons, observing nests built on Neem (*Azadirachta indica*) and Peepal (*Ficus religiosa*) trees in rural and urban areas of Churu, Rajasthan. The birds started nest-building in early March, with egg-laying occurring 15 days after completion of the nest. The incubation period lasted 28-32 days, after which nestlings emerged. They remained in the nest for about 15-18 days before beginning short flights. Successful fledging occurred around 47-52 days, and full independence was achieved by 105 days.

Prof. Soni also elaborated on the nestling development process. In the first few days, the nestlings were blind and immobile with a creamy coat, except for a black head and bill. By 4-8 days, they began opening their eyes and responding to threats. By 8-12 days, wings and feathers started developing. At 16-20 days, the nestlings became fledglings and started flapping their wings. By 20-24 days, they began feeding on food dropped by their parents and attained an average weight of 752 grams. The young birds continued to grow, with their wings, legs, and bill developing up to 45 days. Their weight increased at a rate of 25 grams per day. Around 50 days, they started moving on nearby branches, and by 52 days, they took their first flight. However, they continued to depend on their parents for

food up to three months. The FDP lecture provided valuable knowledge on ecological research methodologies and highlighted the role of birds in maintaining environmental balance. The participants expressed appreciation for the comprehensive analysis and practical implications of the research.

Rapporteur(s)

Dr. Rajpal Yadav

Dr. Pushpa

At the end of the session, Dr. Pushpa extended vote of thanks to Prof. K. C. Soni for his informative lecture. Professor O. P. Jangir expressed his gratitude, acknowledging the valuable contributions made during the session.

DAY 4

20-03-2025

Session-I: Morning Session (10:00 AM – 11:30 AM)

Dr. Ghanshyam Kachhawa (Resource Person)	Molecular Analysis of Insects by DNA Barcoding	60 Minutes online
Introduction of Resource Person	Dr. Pushpa	05 Minutes
Open Session	Participants	25 Minutes
Rapporteur(s)	Dr. Rajender Prasad Prajapat & Dr. Pushpa	

Dr. Pushpa requested to the Resource Person Dr. Ghanshyam Kachhawa and call him for his presentation.

Dr. Kachhawas explained that Molecular identification of insects through DNA barcoding is a powerful tool used in taxonomy, biodiversity assessment, and ecological studies. DNA barcoding relies on the sequencing of a standardized genetic marker to distinguish species based on their unique genetic signatures. This method is particularly useful for identifying cryptic species, immature life stages, and damaged specimens, where traditional morphological identification may be challenging. The mitochondrial cytochrome c oxidase subunit I (COI) gene is the most commonly used marker for insect barcoding due to its high interspecific variability and low intraspecific variation. He also emphasized that the methodology of DNA barcoding involves several key steps. First, DNA is extracted from an insect specimen, followed by the amplification of the COI gene using polymerase chain reaction (PCR) with universal primers. The amplified product is then sequenced, and the obtained sequence is compared against reference databases such as the Barcode of Life Data System (BOLD) or GenBank for species identification. A match with an existing barcode sequence allows accurate species identification, while novel sequences can contribute to expanding genetic databases. Advances in next-generation sequencing (NGS) have further improved the efficiency of DNA barcoding by enabling high-throughput identification multiple specimens simultaneously. Despite its advantages, DNA barcoding has limitations, such as incomplete reference databases and potential

amplification failures due to primer mismatches. Nevertheless, with ongoing advancements in sequencing technology and database expansion, DNA barcoding remains an essential tool for modern entomological research and conservation efforts.

Rapporteur(s)

Dr. Rajender Prasad Prajapat

Dr. Pushpa

At the end of the session, Dr. Pushpa extended vote of thanks to Prof. Ghanshyam Kachhawa for his informative lecture. Professor O. P. Jangir expressed his gratitude, acknowledging the valuable contributions made during the session.

DAY 4

20-03-2025

Session-II: Afternoon Session (01:30 PM – 03:00 PM)

Prof. A. k. Purohit (Resource Person)	Institutional animal ethical committee (IAEC). Rules and its significance	60 Minutes Online
Introduction of Resource Person	Dr. Alpna Sharma	05 Minutes
Open Session	Participants	25 Minutes
Rapporteur(s)	Dr. Rajpal Yadav & Dr. Mahesh Kumar Sharma	

Dr. Alpna Sharma requested to the Resource Person Prof. A. k. Purohit and call him for his presentation.

Prof. A. k. Purohit highlighted the ethical and regulatory dimensions of animal research. Prof. Purohit began by explaining the role and importance of IAEC, emphasizing its function in ensuring the ethical treatment and humane handling of animals used in research. He elaborated on how the IAEC is responsible for monitoring and approving research projects involving animal models while ensuring strict adherence to CPCSEA regulations.

Further he discussed the ethical considerations in animal research, particularly the importance of minimizing animal suffering and exploring alternatives to animal testing. He emphasized the 3Rs Principle-Replacement, Reduction, and Refinement as a guiding framework to promote humane research methodologies.

Prof. Purohit outlined the guidelines for obtaining IAEC approval for research projects and the potential consequences of non-compliance with ethical norms. He concluded with an engaging Q&A session, during which faculty members sought clarifications on ethical approvals, research methodologies, and the broader implications of IAEC regulations in scientific studies.

Prof. Purohit answered each query with depth and clarity, providing practical insights that enriched the discussion.

Rapporteur(s)

Dr. Rajpal Yadav

Dr. Mahesh Kumar Sharma

At the end of the session, Dr. Pushpa extended vote of thanks to Prof. A. k. Purohit for his informative lecture. Professor O. P. Jangir expressed his gratitude, acknowledging the valuable contributions made during the session.

DAY 5

21-03-2025

Session-I: Morning Session (10:00 AM – 11:30 AM)

Prof. P. J. John (Resource Person)	Plastics and Microplastics: A Global Threat to Biodiversity and Health	60 Minutes online
Introduction of Resource Person	Dr. Uma Saini	05 Minutes
Open Session	Participants	25 Minutes
Rapporteur(s)	Dr. Ramavtar Godara & Shri Surendra Kumar Pareek	

Dr. Uma Saini requested to the Resource Person Prof. P. J. John and call him for his presentation.

Prof. P. J. John explained the severe and far-reaching impact of plastic pollution, particularly microplastics, on biodiversity, ecosystems, and human health. He highlighted how the unchecked rise in plastic production, inadequate waste management, and excessive use of single-use plastics have led to widespread environmental contamination. Microplastics, which form due to the breakdown of larger plastic materials, have now permeated land, water, and even the atmosphere, posing a significant threat to marine and terrestrial life. Many animals become trapped in plastic waste, suffering injuries or even death, while marine species frequently ingest plastic, mistaking it for food. This plastic ingestion then leads to the accumulation of harmful toxins in the food chain, affecting not only wildlife but also humans who consume seafood and other contaminated food sources. He emphasized the alarming evidence of microplastics infiltrating the human body, where they have been detected in vital organs such as the lungs, blood, placenta, and even feces. Exposure occurs through multiple pathways, including the inhalation of airborne microplastics from industrial emissions, ingestion of contaminated food and bottled water, and dermal absorption through cosmetics, skincare products, and synthetic clothing. The most commonly detected microplastics in humans include polyethylene, polypropylene, polystyrene, and Polyethylene terephthalate.

WHO reports have confirmed the presence of microplastics in bottled drinking water, raising concerns about their long-term effects on human health. Prof. John also stressed that microplastics are not only consumed through food but are also present in the air we breathe, further increasing human exposure to toxic pollutants. To address this escalating crisis, Prof. John called for urgent and coordinated global action through stringent regulations, international treaties, and sustainable waste management policies. He emphasized the need for a shift towards ethical consumer choices, urging individuals and industries to reduce plastic usage, promote alternatives, and adopt sustainable practices. Raising public awareness and strengthening policies to regulate plastic production and disposal are crucial steps in mitigating this crisis. International organizations like the IUCN (International Union for Conservation of Nature) have been actively advocating for global efforts to combat plastic pollution. They support long-term strategies that encourage nations to invest in sustainable waste management, enhance recycling systems, and take proactive measures to curb the dependency on plastics. Without immediate intervention, the unchecked spread of plastic pollution will continue to threaten ecosystems, biodiversity, and human health on an unprecedented scale. The session provided a thought-provoking discussion on the alarming impact of plastics and microplastics on biodiversity, ecosystems, and human health. The faculty members gained valuable insights into the issue and the need for sustainable solutions. The interactive session concluded with a Question & Answer segment, where participants discussed various challenges and potential strategies to combat plastic pollution effectively.

Rapporteur(s)

Dr. Ramavtar Godara

Shri Surendra Kumar Pareek

At the end of the session, Dr. Pushpa extended vote of thanks to Prof. P. J. John for his informative lecture. Professor O. P. Jangir expressed his gratitude, acknowledging the valuable contributions made during the session.

DAY 5

21-03-2025

Session-II: Afternoon Session (01:30 PM – 03:00 PM)

Prof. Suresh C Joshi (Resource Person)	Rabbit as Suitable Model for Atherosclerosis and Cardio Vascular Research	60 Minutes Online
Introduction of Resource Person	Dr. Pushpa	05 Minutes
Open Session	Participants	25 Minutes
Rapporteur(s)	Dr. Pushpa & Dr. Susmita Purkayastha	

Dr. Pushpa requested to the Resource Person Prof. Suresh C Joshi and call him for his presentation.

Prof. Suresh Joshi highlighted on the rabbit as suitable model for atherosclerosis and cardio vascular research. Prof. Joshi provided a detailed understanding of how rabbits serve as effective models for studying atherosclerosis and cardiovascular diseases. Dr. Joshi highlighted that atherosclerosis remains a leading cause of mortality worldwide, with its underlying mechanisms still not fully understood. He explained that while various animal models like mice, rats, and guinea pigs are used for research, rabbits are particularly advantageous due to their cost-effectiveness, ease of maintenance, and physiological similarity to humans in lipid metabolism. When fed a cholesterol-rich diet, rabbits exhibit significant hypercholesterolemia, leading to atherosclerotic lesions resembling human fatty streaks. Their susceptibility to LDL receptor deficiency further accelerates the development of atherosclerosis, making them invaluable for exploring disease mechanisms and evaluating therapeutic interventions. A key focus of Dr. Joshi's presentation was the role of antioxidants in preventing atherosclerosis. His laboratory has extensively studied the antioxidant and lipid-lowering effects of various Indian spices, including *Cinnamomum verum*, *Coriandrum sativum*, *Amomum subulatum*, *Myristica fragrans*, *Curcuma longa*, and *Allium sativum*, in cholesterol-fed rabbits. These spices demonstrated

significant potential in reducing oxidative stress, mitigating hypolipidemia, and preventing the progression of atherosclerotic lesions.

The concluding slide of Dr. Joshi's presentation summarized the key findings, emphasizing that discriminate and proper use of Indian spices is safe and may have clinical and public health relevance. However, he also highlighted the need for further research to identify specific bioactive compounds and assess their therapeutic potential.

The lecture concluded with an engaging discussion on the translational applications of natural antioxidants in cardiovascular disease management. Participants expressed appreciation for the valuable insights shared by Dr. Joshi, enhancing their understanding of contemporary research in cardiovascular health.

Rapporteur(s)

Dr. Pushpa

Dr. Susmita Purkayastha

At the end of the session, Dr. Pushpa extended vote of thanks to Professor Suresh C Joshi for his informative lecture. Professor O. P. Jangir expressed his gratitude, acknowledging the valuable contributions made during the session.

DAY 6

22-03-2025

Session-I: Morning Session (10:00 AM – 11:30 AM)

Prof. Vandana Nunia (Resource Person)	Role Of Artificial Intelligence & Machine leaning in Cancer Detection	60 Minutes online
Introduction of Resource Person	Dr. Pushpa	05 Minutes
Open Session	Participants	25 Minutes
Rapporteur(s)	Dr. Milan Barman & Dr. Pushpa	

Dr. Pushpa requested to the Resource Person Prof. Vandana Nunia and call him for his presentation.

Prof. Vandana Nunia highlighted the role of Artificial Intelligence & Machine Learning in cancer detection. Most prevalent cancers include breast, lung, colorectal, and prostate cancer. Key risk factors such as tobacco use, obesity, alcohol consumption, poor diet, lack of physical activity, and air pollution, particularly for lung cancer, contribute to rising cases. Additionally, infections like HPV and hepatitis account for 30% of cancer cases in low- and middle-income countries.

She focused on Artificial Intelligence is transforming oncology by improving early detection, aiding radiologists and pathologists in analyzing medical images with greater speed and accuracy. AI-powered tools can recognize patterns in scans, highlight suspicious areas, and assist specialists in identifying cancer at its earliest stages, leading to better patient outcomes. With India's cancer cases projected to increase by 12.8% by 2025, national initiatives are embracing AI-driven healthcare advancements. Institutions like the National Brain Research Centre and the Advanced Centre for Treatment, Research, and Education in Cancer are leading AI-based cancer screening programs. Digital pathology and imaging biobanks are being developed to support early and precise detection.

Further Dr. Nunia explained machine learning and deep learning are at the core of AI-driven cancer diagnostics, enabling tumor classification, outcome prediction,

and personalized treatment planning. Supervised learning uses labeled medical data to train models for cancer detection, while unsupervised learning identifies hidden patterns in genetic and imaging datasets. Reinforcement learning is also being explored to optimize treatment strategies through continuous learning. Deep learning, a powerful subset of machine learning, automates feature extraction and enhances cancer detection with remarkable accuracy. Unlike traditional machine learning, which requires manual feature selection, deep learning models learn directly from raw medical images. Despite its transformative potential, AI in cancer detection faces challenges such as data availability, high computational costs, and regulatory concerns.

Rapporteur(s)

Dr. Milan Barman

Dr. Pushpa

At the end of the session, Dr. Pushpa extended vote of thanks to Prof. Vandana Nunia for his informative lecture. Professor O. P. Jangir expressed his gratitude, acknowledging the valuable contributions made during the session.

DAY 6

22-03-2025

Session-II: Afternoon Session (01:30 PM – 03:00 PM)

Prof. Samit Chatterjee (Resource Person)	Molecular Imaging for Immunotherapy and Targeted Therapy in Cancer	60 Minutes Online
Introduction of Resource Person	Dr. Pushpa	05 Minutes
Open Session	Participants	25 Minutes
Rapporteur(s)	Prof. Shivam Chaturvedi & Shri Surendra Kumar Pareek	

Dr. Pushpa requested to the Resource Person Prof. Samit Chatterjee and call him for his presentation.

Dr. Samit Chatterjee highlighted on cancer remains one of the most complex and heterogeneous diseases, characterized by uncontrolled cell proliferation and immune evasion. Recent advances in molecular imaging have revolutionized cancer diagnosis and treatment, particularly in the fields of immunotherapy and targeted therapy. This lecture will provide insights into the role of molecular imaging in guiding precision oncology, focusing on immune checkpoint imaging and targeted therapeutic strategies.

He also emphasized imaging of Programmed Death-Ligand 1 (PD-L1) using radiolabeled antibodies and peptides. The non-invasive detection of PD-L1 expression in tumors provides a predictive biomarker for patient stratification and real-time monitoring of immunotherapy efficacy. The development of [64Cu]Atezolizumab and [18F]FPy-WL12 as PET imaging agents has facilitated optimized immunotherapeutic interventions. The use of CXCR4 inhibitors and antibody-drug conjugates (ADCs) has shown promising results in enhancing chemotherapy efficacy and tumor regression in lung cancer. Additionally, PSMA-targeted theranostic agents for prostate cancer will be discussed, highlighting their potential in photodynamic therapy and imaging-guided interventions. By integrating molecular imaging with immunotherapy and targeted treatments, we can refine personalized medicine approaches, improve patient outcomes, and

expand the therapeutic landscape in oncology. This lecture revealed the translational research strategies, paving the way for future clinical applications.

Rapporteur(s)

Prof. Shivam Chaturvedi

Shri Surendra Kumar Pareek

At the end of the session, Dr. Pushpa extended vote of thanks to Prof. Samit Chatterjee for his informative lecture. Professor O. P. Jangir expressed his gratitude, acknowledging the valuable contributions made during the session.

DAY 7

23-03-2025

Session-I: Morning Session (10:00 AM – 11:30 AM)

Prof. Madhur Mohan Ranga (Resource Person)	Environmental Threats to Biodiversity and its Mitigation Measures	60 Minutes online
Introduction of Resource Person	Dr. Pushpa	05 Minutes
Open Session	Participants	25 Minutes
Rapporteur(s)	Dr. Mahesh Kumar Sharma & Dr. Ramavtar Godara	

Dr. Pushpa requested to the Resource Person Prof. Madhur Mohan Ranga and call him for his presentation.

Prof. Madhur Mohan Ranga highlighted on Environmental Threats to Biodiversity and its Mitigation Measures because of unplanned development, anthropogenic activities and pollution. Different components of the natural resources have been affected, therefore the environment faces significant threats to biodiversity, including habitat loss, climate change, ecological degradation, over exploitation of species and impact of invasive species. All the above-mentioned factors have an adverse effect on the health and resilience of ecosystem. The ozone depletion, ocean heat content, Asian brown cloud. acid rain, ocean acidification, deforestation, melting of ice caps, food waste, genetically modified organisms and space debris are also causing environmental threats to biodiversity therefore, it is important to protect and preserve our valuable biodiversity. The first step in this regard should be learn the problem and the second step is to share the problem among the masses and third step include the action plan. The action plan should be at individual level, faith group level, business group. government level, institutional level, civil society level, organisation level and youth group level. We should preserve, protect and restore the environmental component by different conservational measures. We should also respect the environmental components with reference to Bhartiya perspective, that is jeev, jagat and jagdish, a triangle.

Rapporteur(s)

Dr. Mahesh Kumar Sharma

Dr. Ramavtar Godara

At the end of the session, Dr. Pushpa extended vote of thanks to Prof. Madhur Mohan Ranga for his informative lecture. Professor O. P. Jangir expressed his gratitude, acknowledging the valuable contributions made during the session.

DAY 7

23-03-2025

Session-II: Afternoon Session (01:30 PM – 03:00 PM)

Prof. Praveen Goswani (Resource Person)	Emerging Technologies in The Field of Life Sciences	60 Minutes Online
Introduction of Resource Person	Dr. Pushpa	05 Minutes
Open Session	Participants	25 Minutes
Rapporteur(s)	Dr. Vikas Saini & Dr. Pushpa	

Dr. Pushpa requested to the Resource Person Prof. Praveen Goswani and call him for his presentation.

Prof. Praveen Goswani highlighted on Emerging Technologies in the Field of Life Sciences. Emerging technologies in life sciences encompass advanced scientific tools, methodologies, and innovations that significantly enhance our understanding and manipulation of biological systems. These technologies have transformative applications in plant and animal sciences, leading to improvements in healthcare, agriculture, and environmental sustainability. This report delves into various emerging technologies, including genome editing, synthetic biology, and omics technologies, highlighting their applications and implications. Prof. Goswami provided an in-depth analysis of how emerging technologies are revolutionizing the study and application of life sciences. The session aimed to equip faculty members with the knowledge and tools necessary to integrate these technologies into their teaching and research practices.

He further highlighted on genomic editing techniques, bioinformatics and data analysis, synthetic biology, nanotechnology in life sciences, and ethical considerations.

The session concluded with a Question & Answer segment where participants engaged in a lively discussion with Prof. Goswami.

Rapporteur(s)

Dr. Vikas Saini

Dr. Pushpa

At the end of the session, Dr. Pushpa extended vote of thanks to Prof. Praveen Goswani for his informative lecture. Professor O. P. Jangir expressed his gratitude, acknowledging the valuable contributions made during the session.

Report on the

VALEDICTORY CEREMONY: March 23, 2025		
FDP REPORT	PROF. O.P. JANGIR	10 MINUTES
VOTE OF THANKS	DR. PUSHPA	5 MINUTES

At the valedictory function, welcome address was given by Dr. Pushpa followed by the report presentation of seven day Faculty Development Program by the coordinator Professor O.P. Jangir. Prof. Jangir compiled and shared the complements on all informative lectures delivered by resource persons. The report highlighted on various emerging technologies including tissue engineering, somatic cell plasticity, genome editing, synthetic biology nano-technology, environmental science, biodiversity, molecular imaging for immunotherapy mobile phone radiation, ethical training epigenomics, animal biotechnology cancer therapy, omics technologies and their applications & implications. Prof. Jangir stated that all sessions successfully aimed to equip faculty members with the knowledge and skills necessary to integrate these technologies into their teaching and research practice. During seven day Faculty Development Program following key topics were discussed:

1. Cancer, a preventable Epidemic: Role of life Style, Diet and Environment
2. Emerging Trends and Challenges of Biodiversity conservation and Management in Thar Desert
3. Health Harzards of Mobile Phone Radiation & Herbal Radiation Protection
4. Ecological Analysis of Desert and its Biodiversity
5. Somatic cell Plasticity and Vitamin A: "Past, Present & Future Prospects
6. How to Study ecology and behavior of a bird, Black ibis as Model
7. Molecular Analysis of Insects by DNA Barcoding
8. Institutional animal ethical committee (IAEC): Rules and its singificance
9. Plastics and Microplastics: A Global Threat to Biodiversity and Health
10. Rabbit as suitable model for atherosclerosis and cardio vascular research

11. Role Of Artificial Intelligence & Machine learning in Cancer Detection
12. Molecular Imaging for Immunotherapy and Targeted Therapy in Cancer
13. Environmental Threats to Biodiversity and its Mitigation Measures
14. Emerging Technologies in The Field of Life Sciences

The session was concluded with Question & answer (open session) segment where participants engaged in a lively discussion with resource persons.

The sessions were highly informative and provided valuable insights into the future of life science & innovative researches. He stated that emerging technologies discussed during FDP sessions are revolutionizing and providing innovative solutions. Emphasis was also given on fostering collaborations between institution to leverage technological advancements. Thus the present

FDP in Zoology provide a platform for faculty members to enhance their knowledge and skills in the field of life science.

Prof. Jangir also shared the appreciations and compliments received from participants on resource person's talk.

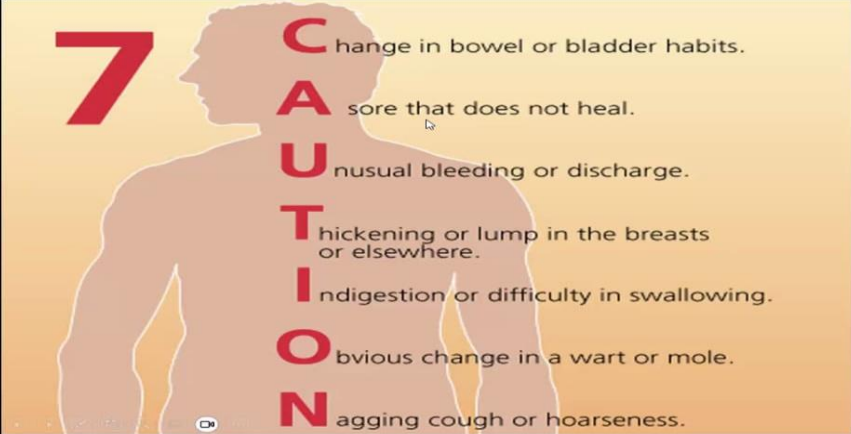


Dr. Pushp (organizing secretary) give vote of thanks and the Faculty Development Program was concluded by National Anthem at the end.

DAY-1

Session-1 (Morning) 17-03-2025

Cancer: Role of Life Style, Diet and Environment

11:28 47.6 KB/s VoLTE 5G 84%



7

Change in bowel or bladder habits.

A sore that does not heal.

Unusual bleeding or discharge.

Thickening or lump in the breasts or elsewhere.

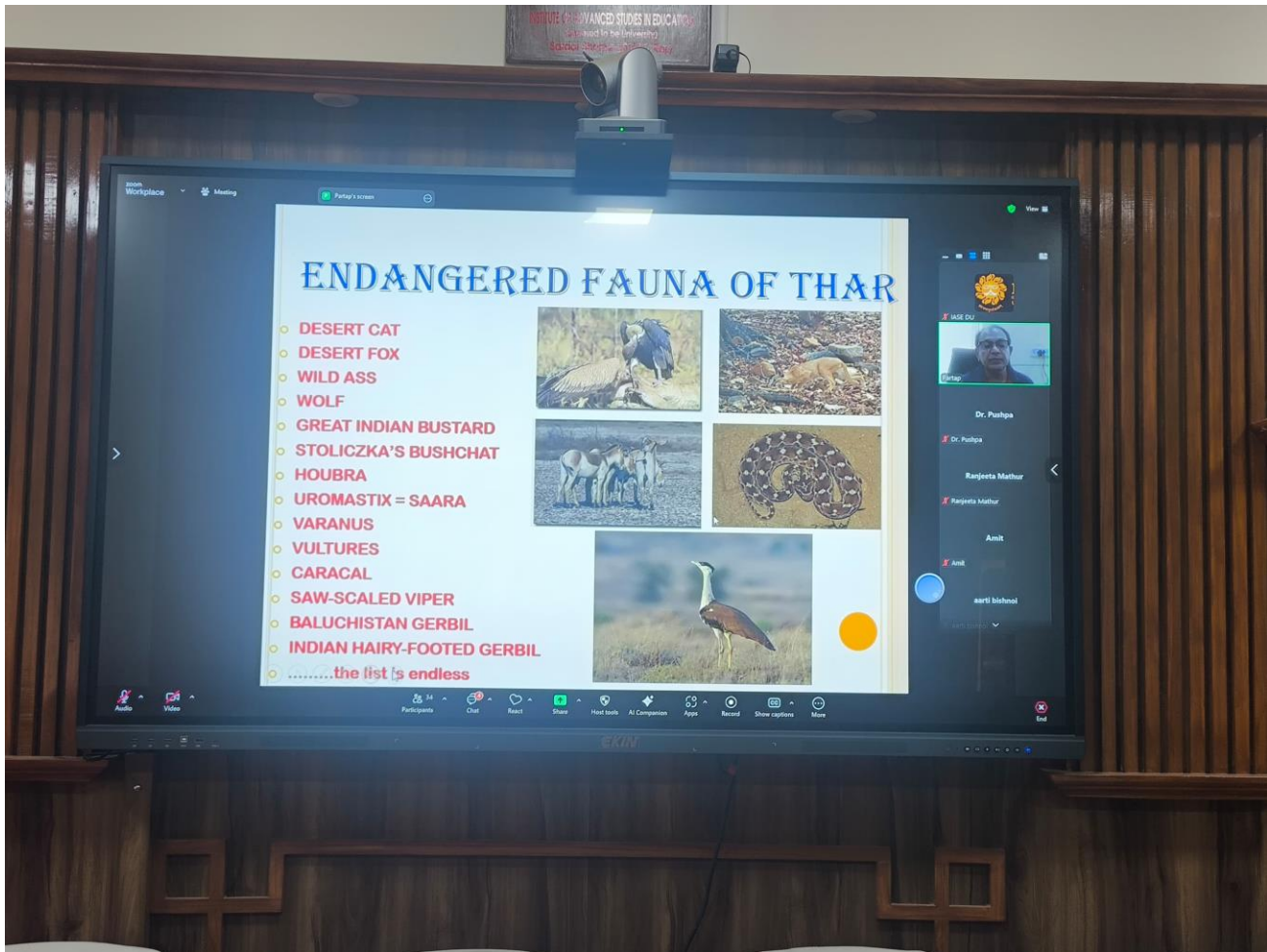
Indigestion or difficulty in swallowing.

Obvious change in a wart or mole.

Nagging cough or hoarseness.

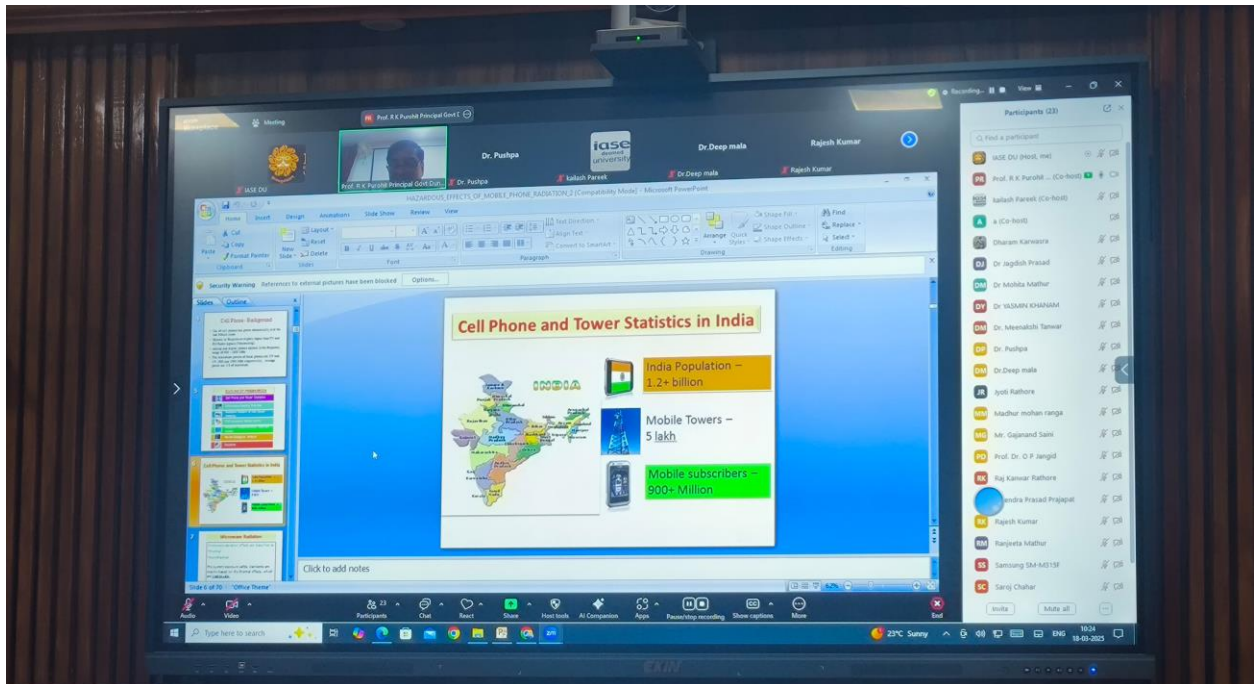
DAY-1

Session-II (Afternoon) 17-03-2025



DAY-2

Session-I (Morning) 18-03-2025



DAY-2

Session-II (Afternoon) 18-03-2025

CARACAL CARACAL CARACAL

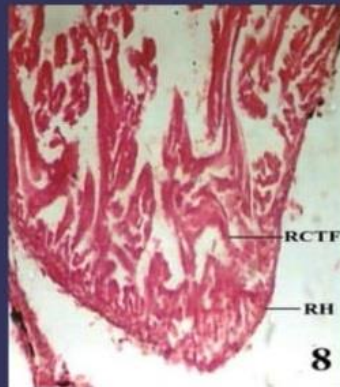
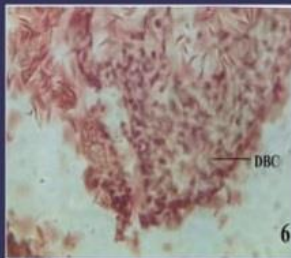
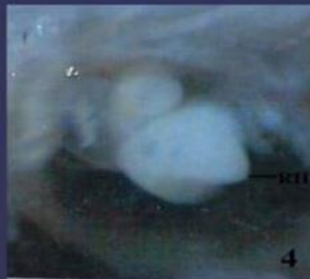
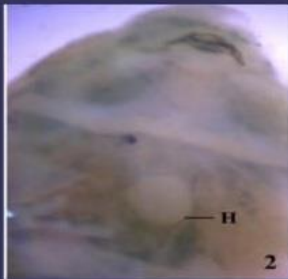


- ❑ The species prefers forest and semi-arid areas
- ❑ The species has restricted distribution in Punjab, Gujarat, Rajasthan and UP
- ❑ Threats – Restricted distribution, habitat loss, poaching
- ❑ Conservation - It is listed in Schedule I of the Indian Wildlife (Protection) Act, 1972

Plasticity of Cardiac Tissue

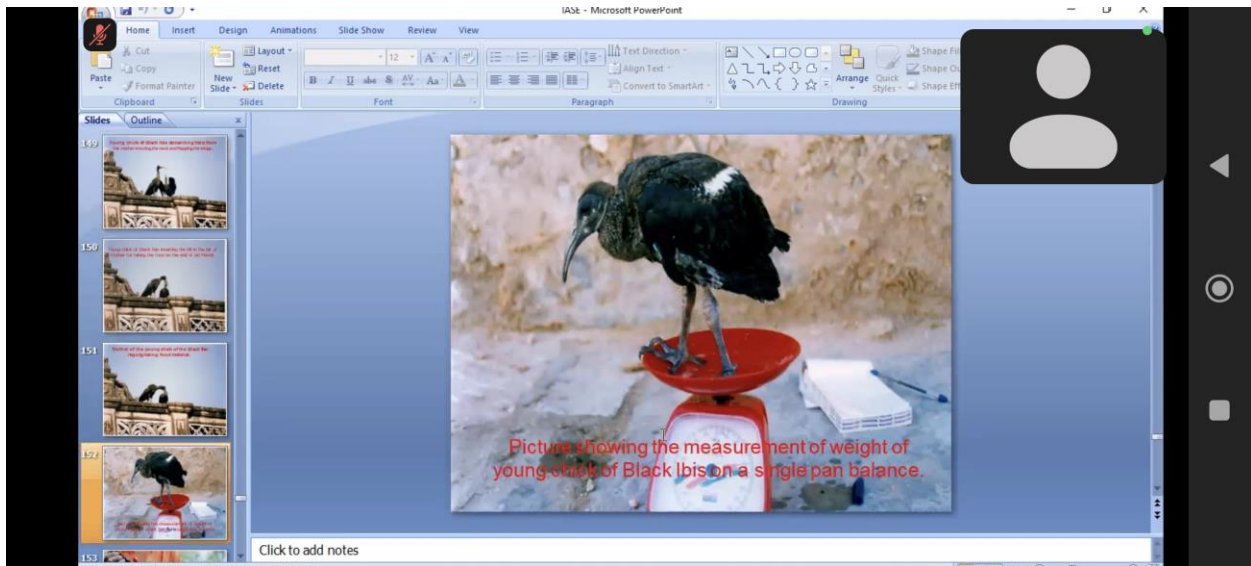
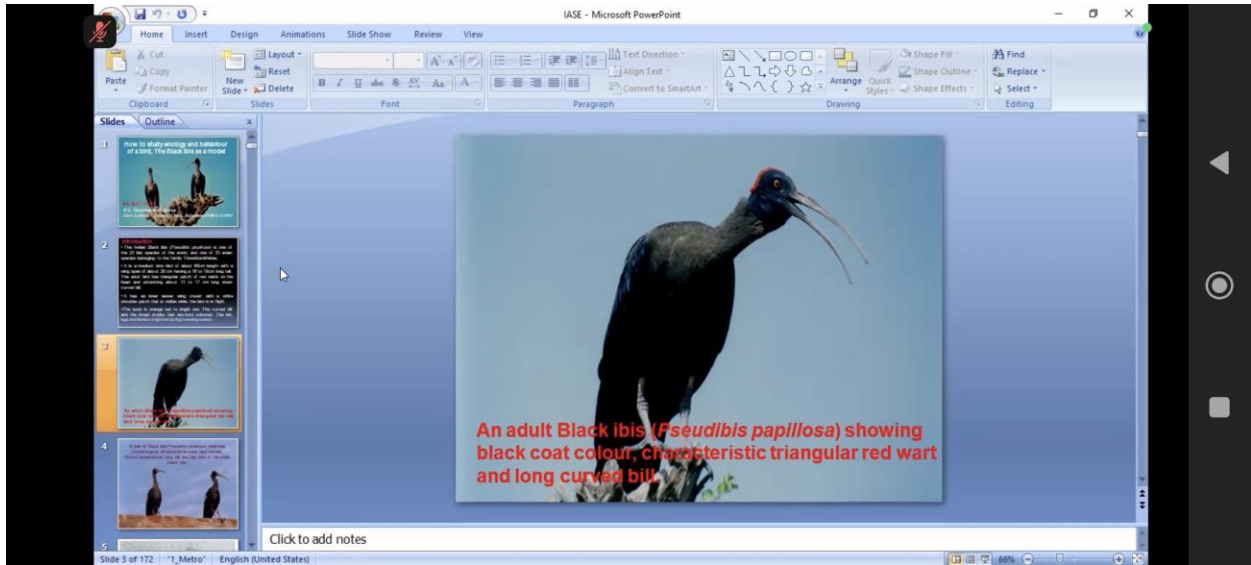
One way or another all species possess the ability to regenerate damaged tissues. The degree of regeneration, however, varies considerably among tissues within body and among species.

The present findings have shown that vitamin A accelerated the percentage of heart regeneration in both modes of experiments -in vivo as well as in transplantation set up.



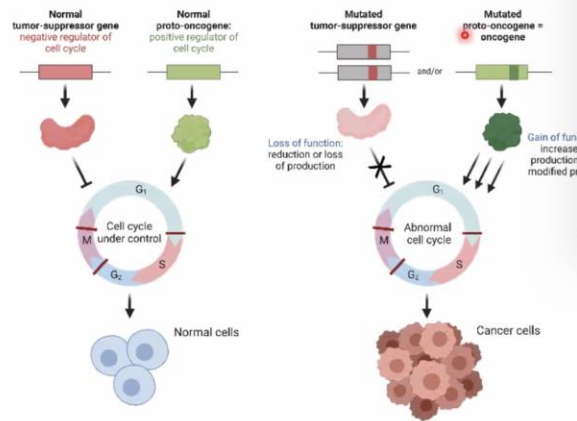
DAY-3

Session-II (Afternoon) 19-03-2025



Genetic and Molecular Basis

- **Oncogenes and tumor suppressor** genes play a role in cancer.
- Mutations in genes such as TP53, BRCA1/2, and RAS contribute to cancer development
- Epigenetic changes also regulate cancer progression.



DAY-4

Session-II (Afternoon) 20-03-2025


0:23:18 11:28

SHOW TASKBAR DISPLAY SETTINGS END SLIDE SHOW

RATIONAL USE OF ANIMALS IN EXPERIMENTS- ROLE OF IAEC

Purpose of animal experiments-

- Education,
- Breeding, and
- Defense research.



Next slide

RATIONAL USE OF ANIMALS IN EXPERIMENTS-
ROLE OF IAEC

Supporters of the use of animals in research include:

- British Royal Society, arguing that scientific achievement in the 20th century has been made possible in some way or other—
- Institute for Laboratory animal research of U.S. National Academy of Sciences argue that even sophisticated computers are unable to model interactions between molecules, cells, tissues, organs, organisms, and the environment, making animal research necessary in many areas.

No Notes.

Slide 34 of 172

DAY-5

Session-I (Morning) 21-03-2025

PRESENCE OF MPs/NPs DETECTED IN HUMANS

RELEASE INTO ENVIRONMENT

- UV Rays Breakdown
- Secondary sources
- Plastic debris
- Ocean Rivers

SOURCES & EXPOSURE

- Primary source: Industries
- Secondary source: Mask
- Exposure routes:
 - Inhalation
 - Ingestion: Food Chain, Drinking water
 - Dermal: Cosmetics/Scrubs

Human Body Locations: HAIR, SKIN & SALIVA, LUNGS, BLOOD, FECES, PLACENTA

Most abundant polymer type: polyethylene, polypropylene, polystyrene, polyamide, methacrylate

Impacts of plastic waste on the marine environment

- Plastic for marine biodegradation barrier:** Plastic debris acts as a barrier and prevents oxygen and sunlight from reaching the seabed, which can affect the growth and survival of marine organisms.
- Physical damage to coral reefs:** Plastic debris can physically damage coral reefs, leading to the death of coral and the degradation of the reef structure.
- Entranglement and suffocation by microplastics:** Marine organisms can become entangled in plastic debris, leading to injury, suffocation, and death. Microplastics can also be ingested by organisms, leading to internal damage and suffocation.
- Ingestion of marine life:** Marine organisms, including fish, seabirds, and marine mammals, can ingest plastic debris, leading to internal damage, starvation, and death.
- Damage to seabirds and mammals:** Plastic debris can cause physical damage to seabirds and mammals, such as entanglement and suffocation.
- Contamination of food chains:** Plastic debris can contaminate the food chain, as plastic particles are ingested by organisms and passed on to predators.

DAY-5

Session-II (Afternoon) 21-03-2025

🔇

Guinea pigs





▶

⊙

■

🔇

Mice





▶

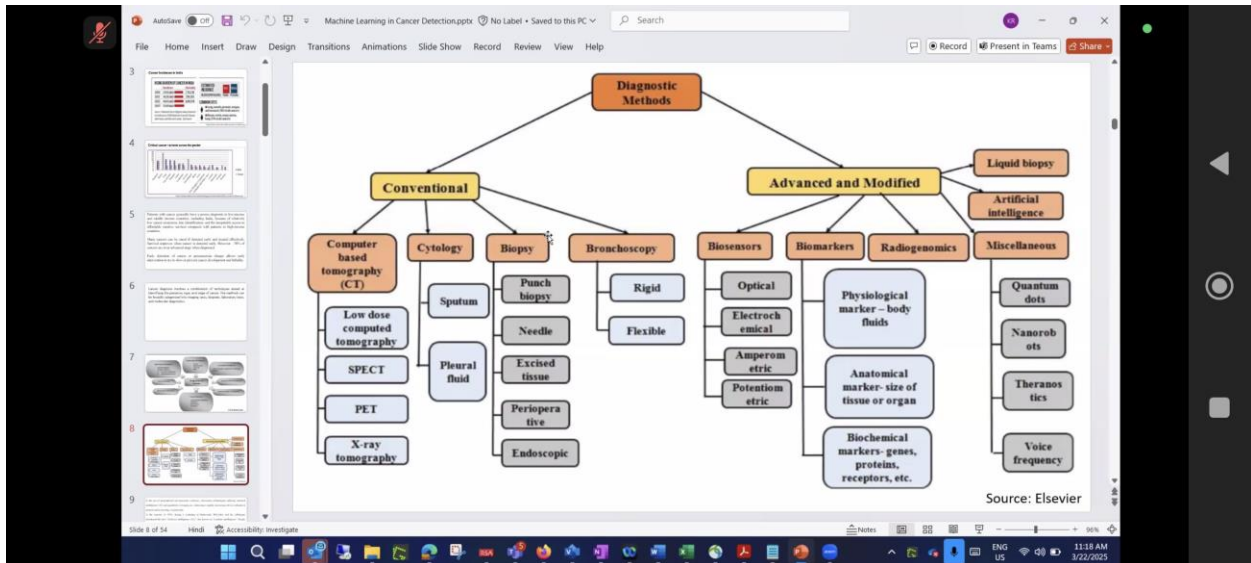
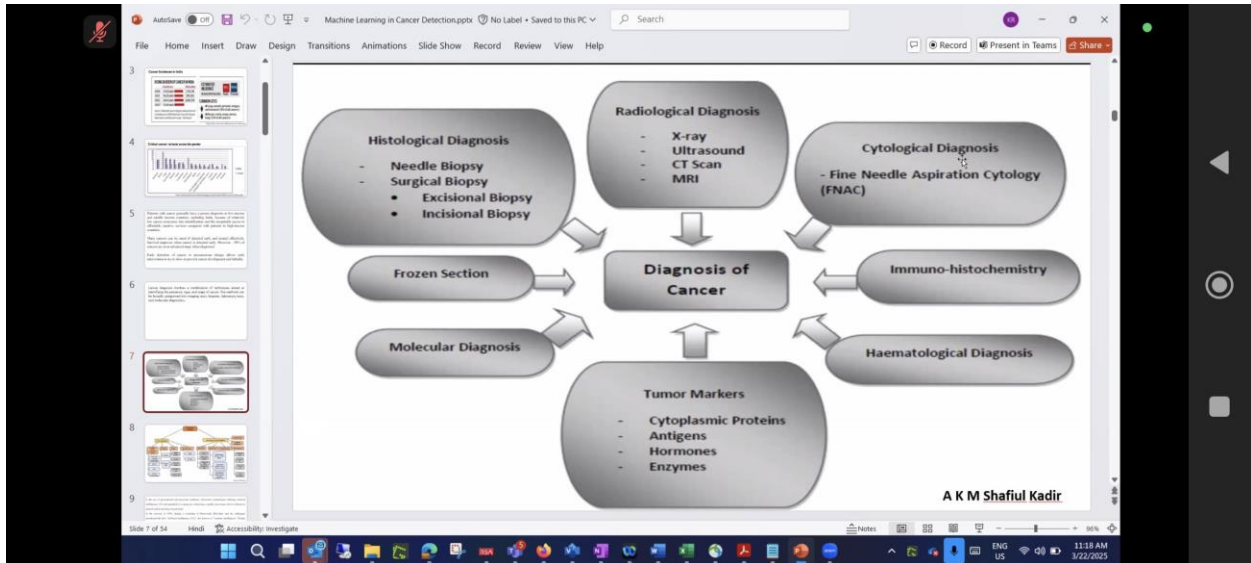
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■

Anushree Joshi's screen

DAY-6

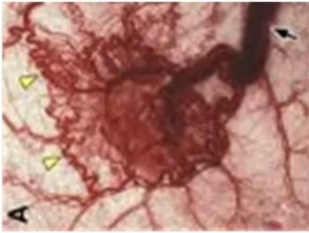
Session-I (Morning) 22-03-2025



The History of Cancer



- Earliest mention in Egyptian Papyrus 1600 BC
- Cancer - from "Carcinos" coined by Hippocrates 400 BC



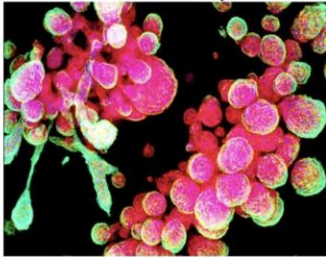
- Landmark discoveries in 20th century : DNA structure, oncogenes, and tumor suppressors.

Dr. Sa

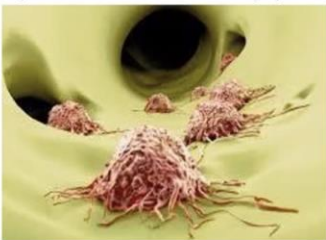
What is Cancer?



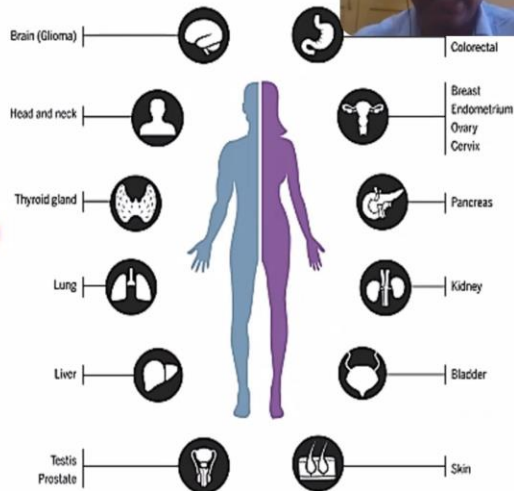
- Uncontrolled cell proliferation



- Spread to other body parts



- Heterogenous, >100 di



DAY-7



Session-I (Morning) 23-03-2025

11:25

Extinct

39

- Dodo bird



Golden Toad

11:24


82

Navigation icons: back, home, search, list

Video call window showing a man in a white shirt

11:24

Near Threatened



Platipus *Ornithorhynchus anatinus*

27

11:24

82



Navigation icons: back, home, search, list

Video call window showing a man in a white shirt

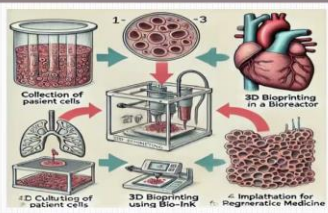
DAY-7

Session-II (Afternoon) 23-03-2025

2:08 56.0 KB/s 5G 51





Tissue Engineering

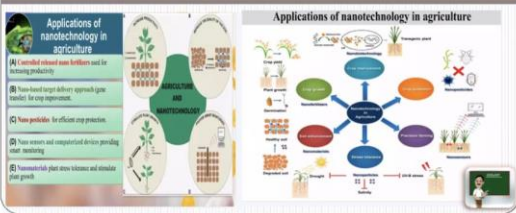


1. Collection of patient cells
2. 2D Culturing of patient cells
3. 3D Bioprinting using Bio-Ink
4. 3D Bioprinting in a Bioreactor
5. Implantation for Regenerative Medicine

2:06 28.3 KB/s 5G 52

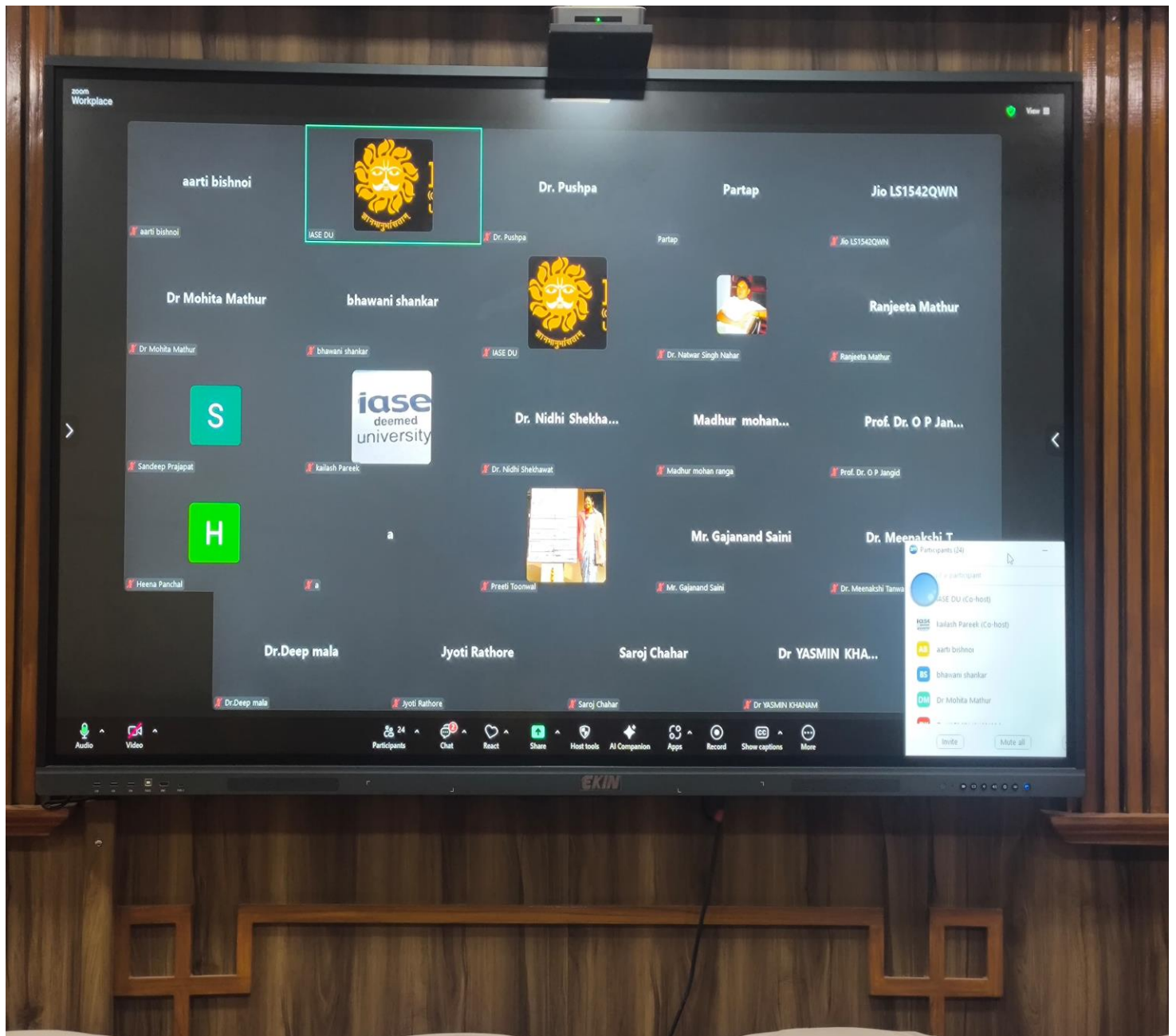


Nanotechnology Applications Agriculture



Applications of nanotechnology in agriculture

- (A) Controlled release nano-biofertilizers used for increasing productivity
- (B) Nano-based target delivery approach gene transfer for crop transgenesis
- (C) Nano-pesticides for efficient crop protection
- (D) Nano-sensors and computerized devices providing early monitoring
- (E) Nanomaterials plant stress tolerance and abiotic stress growth





सात दिवसीय फैकल्टी डवलपमेंट प्रोग्राम का आयोजन



न्यूज ज्योति संवाददाता

सरदारशहर। आई.ए.एस.ई. डीम्ड टू बी यूनिवर्सिटी, गांधी विद्या मंदिर, सरदारशहर के विज्ञान संकाय के रसायन शास्त्र, फार्मेसी संकाय एवं प्राणी शास्त्र विभाग में फैकल्टी डवलपमेंट कार्यक्रम प्रारम्भ किया गया। जिनका विषय क्रमशः- 'रीसेंट एडवांसमेंट इन केमिकल एण्ड फार्मास्युटिकल साइंसेज' व 'इमर्जिंग ट्रेंड्स ऑफ रिसर्च इन टिश्यू इंजीनियरिंग एण्ड डवलपमेंटल बायोजॉजी/लाइफ साइंसेज' रखा गया। कार्यक्रम समन्वयक व सह-समन्वयक क्रमशः प्रो. वी.के. स्वामी व प्रो. ओ.पी. जांगिड़ रहेंगे। कार्यक्रम का शुभारम्भ मां सरस्वती के समक्ष दीप प्रज्वलन एवं प्रार्थना द्वारा किया गया। स्वागत सम्भाषण एवं कार्यक्रम परिचय प्रो. ओ.पी. जांगिड़ ने दिया। सात दिवसीय कार्यक्रम में देश के विभिन्न क्षेत्रों के विशेषज्ञ अपने व्याख्यान द्वारा

दैनिक न्यूज ज्योति एडिशन की ये खबर

Feedback

Your Name	Designation	Institution/Organization	Subject	Quality of	Relevance	Expertise	Organizati	Interactio	Learning R	Overall Sa	Would you	Would you
Dr. meenakshi	Assistant Professor	Smt. Kamla Devi Gauridutt Mittal Mahila Mahavidyalaya Sardarshah	Zoology	Very Good	Very Good	Very Good	Very Good	Good	Very Good	Very Good	Yes	Yes
Dr. meenakshi	Assistant Professor	Smt. Kamla Devi Gauridutt Mittal Mahila Mahavidyalaya Sardarshah	Zoology	Very Good	Very Good	Very Good	Very Good	Good	Very Good	Very Good	Yes	Yes
Iqbal Singh	HOD	Dr. Bhim Rao Ambedkar Government College Sriganaganagar	Zoology	Good	Good	Good	Very Good	Good	Very Good	Very Good	Yes	Yes
Iqbal Singh	HOD	Dr. Bhim Rao Ambedkar Government College Sriganaganagar	Zoology	Very Good	Good	Very Good	Very Good	Very Good	Very Good	Very Good	Yes	Yes
Dr. Iqbal Singh	HOD	Dr. Bhim Rao Ambedkar Government College Sriganaganagar	Zoology	Very Good	Good	Very Good	Very Good	Very Good	Very Good	Very Good	Yes	Yes
Iqbal Singh	HOD	Dr. Bhim Rao Ambedkar Government College Sriganaganagar	Zoology	Good	Very Good	Good	Very Good	Good	Very Good	Good	Yes	Yes
Iqbal Singh	HOD	Dr. Bhim Rao Ambedkar Government College Sriganaganagar	Zoology	Very Good	Very Good	Very Good	Very Good	Good	Good	Very Good	Yes	Yes
Iqbal Singh	HOD	Dr. Bhim Rao Ambedkar Government College Sriganaganagar	Zoology	Very Good	Very Good	Very Good	Very Good	Good	Good	Very Good	Yes	Yes
Iqbal Singh	HOD	Dr. Bhim Rao Ambedkar Government College Sriganaganagar	Zoology	Very Good	Very Good	Very Good	Very Good	Good	Good	Very Good	Yes	Yes
SANDEEP	Scholar/Student	IASE	Zoology	Very Good	Very Good	Very Good	Very Good	Very Good	Good	Very Good	Yes	Yes
Dr. Natwar Singh	Assistant Professor	R. D. Govt. Girls College, Bharatpur	Zoology	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Yes	Yes
Dr. Natwar Singh	Assistant Professor	R. D. Govt. Girls College, Bharatpur	Zoology	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Yes	Yes
Dr. Mohita Mathur	Assistant Professor	Lachoo Memorial College of Science and Technology, Jodhpur	Zoology	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Yes	Yes
Dr. Mohita Mathur	Assistant Professor	Lachoo Memorial College of Science and Technology, Jodhpur	Zoology	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Yes	Yes
Dr. Mohita Mathur	Assistant Professor	Lachoo Memorial College of Science and Technology, Jodhpur	Zoology	Very Good	Very Good	Very Good	Very Good	Good	Very Good	Very Good	Yes	Yes
Dr. Mohita Mathur	Assistant Professor	Lachoo Memorial College of Science and Technology, Jodhpur	Zoology	Very Good	Very Good	Very Good	Very Good	Good	Very Good	Very Good	Yes	Yes
Dr. Mohita Mathur	Assistant Professor	Lachoo Memorial College of Science and Technology, Jodhpur	Zoology	Very Good	Very Good	Very Good	Very Good	Good	Very Good	Very Good	Yes	Yes
Dr. Mohita Mathur	Assistant Professor	Lachoo Memorial College of Science and Technology, Jodhpur	Zoology	Very Good	Very Good	Very Good	Very Good	Good	Very Good	Very Good	Yes	Yes
Dr. Mohita Mathur	Assistant Professor	Lachoo Memorial College of Science and Technology, Jodhpur	Zoology	Very Good	Very Good	Very Good	Very Good	Good	Very Good	Very Good	Yes	Yes
Dr. Surender kumar	Assistant Professor	Sri Gurunanak girls p g college	Zoology	Very Good	Very Good	Very Good	Very Good	Very Good	Good	Very Good	Yes	Yes
Dr. Nidhi Shekhawat	Other	Brightmoon Girls PG College, Govindgarh, Jaipur	Zoology	Very Good	Very Good	Very Good	Very Good	Good	Very Good	Very Good	Yes	Yes
Dr. Nidhi Shekhawat	Other	Brightmoon Girls PG College, Govindgarh, Jaipur	Zoology	Very Good	Very Good	Very Good	Very Good	Good	Very Good	Very Good	Yes	Yes
Dr. Nidhi Shekhawat	Other	Brightmoon Girls PG College, Govindgarh, Jaipur	Zoology	Very Good	Very Good	Good	Very Good	Good	Very Good	Very Good	Yes	Yes
Dr. Nidhi Shekhawat	Other	Brightmoon Girls PG College, Govindgarh, Jaipur	Zoology	Very Good	Very Good	Very Good	Very Good	Good	Very Good	Very Good	Yes	Yes
Dr. Nidhi Shekhawat	HOD	Brightmoon Girls PG College, Govindgarh, Jaipur	Zoology	Very Good	Very Good	Very Good	Very Good	Good	Very Good	Very Good	Yes	Yes
Dr. Nidhi Shekhawat	Other	Brightmoon Girls PG College, Govindgarh, Jaipur	Zoology	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Yes	Yes
Dr. Yogita Chhangani	HOD	Lachoo Memorial College Of Science and Technology, Autonomous	Zoology	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Yes	Yes
Dr. Nidhi Shekhawat	Other	Brightmoon Girls PG College, Govindgarh, Jaipur	Zoology	Very Good	Very Good	Very Good	Very Good	Good	Very Good	Very Good	Yes	Yes
Dr. Nidhi Shekhawat	Other	Brightmoon Girls PG College, Govindgarh, Jaipur	Zoology	Very Good	Good	Very Good	Good	Good	Good	Good	Yes	Yes
VIKRAM SINGH MEEH	Scholar/Student	PANDIT DEENDAYAL UPADHYAY UNIVERSITY SIKAR	Zoology	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Yes	Yes
Jainender Bhati	Assistant Professor	Seth G.L. Bihani S.D. P.G. College Sriganaganagar	Zoology	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Yes	Yes
Jainender Bhati	Assistant Professor	Seth G.L. Bihani S.D. P.G. College Sriganaganagar	Zoology	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Yes	Yes
Jainender Bhati	Assistant Professor	Seth G.L. Bihani S.D. P.G. College Sriganaganagar	Zoology	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Yes	Yes
Jainender Bhati	Assistant Professor	Seth G.L. Bihani S.D. P.G. College Sriganaganagar	Zoology	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Yes	Yes
Jainender Bhati	Assistant Professor	Seth G.L. Bihani S.D. P.G. College Sriganaganagar	Zoology	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Yes	Yes
Mr. Gajananand Saini	Other	IASE Deemed To Be University, Sardarshahar(Churu), Rajasthan	Zoology	Very Good	Very Good	Good	Good	Good	Good	Very Good	Yes	Yes
Dr. sunita goyal	Assistant Professor	LACHOO MEMORIAL COLLEGE OF SCIENCE AND TECHNOLOGY JOD	Zoology	Very Good	Good	Very Good	Good	Good	Good	Good	Yes	Yes
Dr. sunita goyal	Assistant Professor	LACHOO MEMORIAL COLLEGE OF SCIENCE AND TECHNOLOGY JOD	Zoology	Very Good	Very Good	Good	Good	Good	Good	Good	Yes	Yes
Dr. sunita goyal	Assistant Professor	LACHOO MEMORIAL COLLEGE OF SCIENCE AND TECHNOLOGY JOD	Zoology	Very Good	Good	Good	Very Good	Good	Very Good	Very Good	Yes	Yes
Jainender Bhati	Assistant Professor	Seth G.L. Bihani S.D. P. G. College Sriganaganagar	Zoology	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Yes	Yes
Jainender Bhati	Assistant Professor	Seth G.L. Bihani S.D. P.G. College Sriganaganagar	Zoology	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Yes	Yes
Dr. Ramawatar Goda	Assistant Professor	Institute of Advanced Studies in Education GVM Sardarshahr Churu	Zoology	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Yes	Yes
Jainender Bhati	Assistant Professor	Seth G.L. Bihani S.D.P.G. College Sriganaganagar	Zoology	Very Good	Very Good	Very Good	Very Good	Good	Good	Good	Yes	Yes

Amit nagal	Other	EY IT services	Zoology	Good	Far	Good	Far	Good	Good	Good	Yes	Yes
Dr. Jagdish Prasad	HOD	Smt Rukmani Devi Ramdev Ladha Govt PG College Nawa city	Zoology	Very Good	Very Good	Good	Very Good	Very Good	Good	Good	Yes	Yes
Dr. Jagdish Prasad	HOD	Smt Rukmani Devi Ramdev Ladha Govt PG College Nawa city	Zoology	Very Good	Very Good	Good	Very Good	Good	Very Good	Good	Yes	Yes
Dr. Jagdish Prasad	HOD	Smt Rukmani Devi Ramdev Ladha Govt PG College Nawa city	Zoology	Very Good	Very Good	Good	Very Good	Good	Very Good	Very Good	Yes	Yes
Dr. Jagdish Prasad	HOD	Smt Rukmani Devi Ramdev Ladha Govt PG College Nawa city	Zoology	Very Good	Good	Good	Very Good	Good	Very Good	Good	Yes	Yes
Dr. Jagdish Prasad	HOD	Smt Rukmani Devi Ramdev Ladha Govt PG College Nawa city	Zoology	Good	Very Good	Very Good	Very Good	Good	Very Good	Very Good	Yes	Yes
Dr. Ranjeeta Mathur	Assistant Professor	Lachoo Memorial College of Science and Technology (Autonomous	Zoology	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Yes	Yes
Dr. Ranjeeta Mathur	Assistant Professor	Lachoo Memorial College of Science and Technology (Autonomous	Zoology	Very Good	Very Good	Very Good	Very Good	Good	Very Good	Very Good	Yes	Yes
Dr. Ranjeeta Mathur	Assistant Professor	Lachoo Memorial College of Science and Technology (Autonomous	Zoology	Very Good	Good	Very Good	Very Good	Very Good	Very Good	Very Good	Yes	Yes
Dr. YASMIN KHANAM	Assistant Professor	Govt nm pg college Hanumangarh	Zoology	Very Good	Good	Very Good	Very Good	Very Good	Very Good	Very Good	Yes	Yes
Dr. Ranjeeta Mathur	Assistant Professor	Lachoo Memorial College of Science and Technology (Autonomous	Zoology	Very Good	Very Good	Very Good	Very Good	Good	Very Good	Very Good	Yes	Yes
Dr. Ranjeeta Mathur	Assistant Professor	Lachoo Memorial College of Science and Technology (Autonomous	Zoology	Very Good	Very Good	Very Good	Very Good	Good	Very Good	Very Good	Yes	Yes
Dr. Ranjeeta Mathur	Assistant Professor	Lachoo Memorial College of Science and Technology (Autonomous	Zoology	Very Good	Very Good	Very Good	Very Good	Good	Very Good	Very Good	Yes	Yes
Jyoti Rathore	Scholar/Student	SKD	Zoology	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Yes	Yes
Dr. Ranjeeta Mathur	Assistant Professor	Lachoo Memorial College of Science and Technology (Autonomous	Zoology	Very Good	Very Good	Very Good	Very Good	Good	Very Good	Very Good	Yes	Yes

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