### **Department of Biotechnology**

### Annual Progress Report supported under Star College Scheme (2022-23)

1. Name of the College: Kashi Naresh Government P.G. College, Gyanpur, Bhadohi

2. Name of Coordinator, designation, Address, Phone nos. Dr. Rashmi Singh

Address, Phone nos. **Assistant Professor** 

Department of Botany

K. N. Govt. P.G. College, Gyanpur, Bhadohi-

221304, UP 9415447808

S.N.	Department	Name of coordinator	Designation	Mobile no.
1	Botany	Dr. Rashmi Singh	Assistant Professor	9415447808
2	Chemistry	Dr. Abhimanyu Yadav	Assistant Professor	8517866497
3	Physics	Dr. Kalpana Awasthi	Assistant Professor	8418957246
4	Zoology	Mr. Ratnesh Soni	Assistant Professor	9415153338

3. Assessment duration: 01/04/2022 to 31/12/2023 Duration in years: 01.5 Year

### 4. Details of Departments Supported

S.N	Name of	Courses (B.Sc./M.Sc./PG	Regular Faculty members
	Department	Diploma, certificate etc) offered	Total, with Ph.D. and without Ph.D
1	Botany	B.Sc. and M.Sc.	Total: 07; Ph.D.: 07; without Ph.D.: 00
			Dr. Rashmi Singh, Ph.D., NET
			Dr. R.K. Pandey, Ph.D.,NET
			Dr. Saumya Mishra, Ph.D., SLET
			Dr. Suman Gupta, Ph.D.
			Dr. Shefali Singh, Ph.D, NET
			Dr. Ravi Kumar Yadav, Ph.D., NET
			Dr. Gita Yadav, Ph.D
2	Chemistry	B.Sc. and M.Sc.	Total: 12; Ph.D.: 08; without Ph.D.: 04
			Dr. V.K. Yadav, Ph.D., NET
			Dr. Abhimanyu Yadav, Ph.D., NET
			Dr. Rajneesh Dwivedi, Ph.D
			Dr. Arvind Kumar Pandey, Ph.D, NET
			Mr. Dheerendra Kumar, NET
			Dr. Siddharth Barnwal, Ph.D, NET
			Dr. Deepali Jaiswal, Ph.D, NET
			Dr. Shikha Mehta, Ph.D, NET
			Dr. Jyoti Tiwari, Ph.D, NET
			Mr. Nikhil Kumar Singh, NET
			Ms. Jyoti Maurya, NET
			Mr. Amit Kumar Sharma, NET
3	Physics	B.Sc. and M.Sc.	Total: 09 ; Ph.D.: 04; without Ph.D.:05
			Dr. Kalpana Awasthi, Ph.D., GATE
			Dr. Priyanka Srivastava, Ph.D.
			Mr. M.K. Vishwakarma, M.Sc., NET
			Dr. S.P. Mishra, Ph.D.
			Dr. Sadanand Singh, Ph.D
			Mr. Ashish Verma, NET
			Mr. Akhilesh Kumar, NET
			Mr. Jais Kumar, NET
			Mr. Dhanajay Gaur, NET
			, ,
4	Zoology	B.Sc. and M.Sc.	Total: 05; Ph.D.: 02; without Ph.D.:03
			Dr. Anju Verma, Ph.D., NET
			Mr. Ratnesh Soni, M.Sc., NET
			Dr. Deepak verma, Ph.D., NET
			Mr. Vivek Verma., NET
			Ms. Aaknksha Kushwaha, NET

- 5. Number & Date of Advisory committee meeting: 01, 21/03/2022 (Annexure II)
- **6.** Qualitative improvements due to DBT support. Please highlight 5 salient points (within 500 words).
- With the DBT Support, Departments organized minor projects as well as interdisciplinary workshops. Department of Botany organizes minor project on green synthesis of silver nanoparticle Using Mushroom, Department of Physics on Preparation of graphene oxide using agro waste i.e. rice husk.
- The field visits were conducted to research institutes under this scheme, students got exposure to newer techniques during their institutional visit. Since the students are from rural area, due to this scheme they attended such field trips and got academic and industrial exposure. The visit enhances their curiosity in research oriented studies. The visit to the Central Instrumentation Facility, IIT(BHU) Varanasi was organized by chemistry department, Visit to Birbal Sahni Institute of Palaeobotany and CIMAP (Lucknow) by Botany Department, Department of Physics, University of Allahabad, Prayagraj and Department of Biochemistry, Lucknow University, Lucknow by Department of Zoology.
- First time hands on training were carried out in such a large scale which develops critical thinking skills, real-world experience and knowledge in the students. All the departments were organized the hands on training programme for UG students. (Appendix –I)
- Due to DBT Star college scheme, the faculties got an opportunity to organize workshops, winter school/ summer school and invite the guest speakers for the students and faculty which provide a broad academic exposure to them. The guest lectures on various topics have enriched the knowledge of the faculty and students (Appendix –I)
- Outreach Activities were organized with this support to nurture school education. (Appendix-I)
  - 7. Any Novel aspect introduced or planning to introduce during the Scheme duration.

There was no concept of organizing winter school/summer school before the implementation of this scheme. After procuring new instruments from this scheme, now minor research projects at undergraduate level are introduced. Both these activities orient the students towards research.

**8.** Lessons learnt / difficulties faced/suggestions if any, in implementation of the programme and utilization of DBT grant. (Max 3 points within 300 words).

As we don't have any dedicated section of accounts in our College, change in transaction portal for grant affect the scheme in my college. We were not able to consume the grant in time frame.

### 1. Kev performance indicators

S. no	Indicator	Pre-support				During /After Support							Rem arks				
1	No. of students admitted	Total =908						Total =1445									
		]	M= 506		]	F= <b>40</b>	2			M=5	78			F=8	67		
		SC- 48	ST- 00	OBC- 263 - 19 5	22	ST- 00	OBC- 219	G 16 1	SC 44	ST 00	OBC 284	G 250	SC 36	ST 00	OBC 465	G 366	
2	No. of students passing out (%) Students Admitted/passing out (pass %)			93.	7 %							97.	.2				
3	Drop-out rates				5%							89					
4	No. of students opting for MSc				00							15					
5	Average marks				70				75								
6	No. of hands-on experiments being conducted		00			16 (Appendix-I, 1)											
7	No. of new experiments introduced			(	00				19 (Appendix-I, 2)								
8	Publications (scopus indexed) /patents, if any.		35					47 (	Apper	ndix-	I, 3)						
9	Training received by faculty			2	24						33 (	Apper	ndix-	I, 4)			
10	Exhibitions/seminars /training courses conducted	00 12 (Appendix-I, 7)															
11	Books/journals subscribed from grants	400			471 (Appendix-I, 11)												
12	Outreach activities (Popular lectures)		00 05 (Appendix-I, 9)														
13	Colleges mentored to apply for DBT Star College grants		00			00											
14	Invited lectures			(	00						12 ((	Apper	ıdix-	I, 10)			

<sup>•</sup> Proofs (S.No. 6-14 not more than 5 pages, 1.5 line spacing 11 times roman font size) to be provided duly attested by Principal and Coordinator.

### 2. Self evaluation

Department	*Objective (as stated in proposal)	% achieved	Reasons for underachievement / If achieved, state in quantitative metrics
Chemistry	Organized invited lectures	90	1.8
	• Field visit	100	2.0
	Hands on training , Quiz and poster	70	1.7
	<ul> <li>training for laboratory staff.</li> </ul>	50	1.0
Physics	• Invited lectures	100	2.0
	<ul><li>Workshops</li><li>Hands on training</li></ul>	80 100	1.8 2.0
	• Field Visit	100	2.0
	<ul><li>Interdisciplinary Project</li><li>Workshop for supporting staff</li></ul>	60	1.6
	• Winter School	90	1.9
	<ul> <li>Essay Competition and Quiz</li> </ul>	100	2.0
	Competition	100	2.0
Botany	Invited lectures	90	1.9
	<ul><li>Workshops</li></ul>	60	1.6
	Hands on training	100	2.0
	Field Visit	100	2.0
	Interdisciplinary Project	60	
	Workshop for supporting staff	100	1.6 2.0
	• Winter School	100	
	• Essay Competition/ Science		2.0
	Exhibition and Quiz Competition	100	2.0
Zoology	• Invited lectures	50	1.0
	• Workshops	100	2.0
	<ul> <li>Hands on Training</li> </ul>	100	2.0
	• Field Visit	100	2.0
	<ul> <li>Essay Competition/ Science</li> <li>Exhibition and Quiz Competition</li> </ul>	60	1.8

<b>3.</b>	<b>ZBSA</b>	<b>Status:</b>	(Mark	Check	Box	):
~•		Cutuasi	(11200111			,

Not opened		Under process	Opened but not mapped on PFMS	Account is functional	<b>√</b>	]
Remarks	if,	, any:		•		_

### 4. **Sanctioned Budget details:**

(Rs. in Lakhs)

			\	ot m zamo)
Head	Total Released	Total	Balance as on	Remarks if any
	Budget from DBT	Expenditure	31.12.2023	
Grants for creation of	40.00	40.00	00.00	
capital assets				
(Non- recurring)				
Grants-in-aid General (Recurring)	14 +13.142=27.142	22.259	4.883	The balance amount will be utilized upto 29th Feb 2024 as per extension given by DBT to us.
Total	67.142	62.259	4.883	(Annexure III)

Course Coordinator Projecti Seallinator DBT - Star College Scheme K.N. Govt. P.G. College

Gyanpur (Bhadohi)-221304

(Whit Seal) G. College K.N. Govt. P.G. College Gyanpur (Bhadohi)-221304

### Appendix -I

### 1. Details of hands on training programme

Dates	Details of training programme	Practical demonstrated / training conducted by	Class and no. of Beneficiaries			
	Departm	ent: Zoolo				
4/08/2023	Permanent slide preparation		Dr. Deepak Verma, R. Soni	B.Sc. II Sem (65)		
5/8/2023- 6/08/2023	Qualitative analysis of Carbohydrat and fat	e, protein	Dr. Akanksha Kushwaha R. Soni	B.Sc. II Sem (184)		
24/06/2023	Sequence analysis by using BLAST		Dr. Deepak Verma, R. Soni	B.Sc. IV Sem (80)		
12/08/2023	Recording of BP using sphygmomano	Dr. Vivek Verma	B.Sc. II Sem (90)			
	Departm	nent: Botar	  V			
27/03/2023	Hydroponics		Dr. Ravi Kumar Yadav	B.Sc. IIIrd Sem (70)		
05/08/2023	Separation of Amino Acids and Plant by Paper Chromatography	Pigment	Dr. Shefali Singh	B.Sc. IV th Sem (70)		
16/10/2023-			Dr. Ravindra Pandey	B.Sc. Vth Sem		
17/10/2023	Plant Tissue Culture Techniq		Dr. Ravi Kumar Yadav	(90)		
16/12/2023	Bioinformatics- Biological Data Anal	lysis	Dr. Ravi Kumar Yadav and Dr. Shefali Singh	B.Sc. Vth Sem (60)		
	Departme					
10/08/2023	To determine of Hardness of Water	Dr. Om P Dr. Dhire	rakash ndra Kumar	B.Sc. Ist Sem (120)		
24/02/2023	Hands on training Programme: Preparation of <i>m</i> -dinitrobenzene, <i>p</i> - nitroacetanilide	Dr. Deepa	ali Jaiswal	B.Sc. IIIrd Sem (32)		
11/08/2023	Hands on Training to determine the concentration of KMnO4 by colorimetrically	Dr. Sidha Dr. Amit	rth Baranwal Kumar	B.Sc. IInd Sem (70)		
10/01/2024	Hands on Training Workshop on Conductometric titration: Principle and Applications	Dr. Shikh Dr. Jyoti		B.Sc. IInd Sem (90)		
		ent: Physi	cs			
08/06/	Moment of Inertia of flywheel &	Dr. Ritu		B.Sc. II Sem.		
2023	Newton's second law of motion		e Professor	(55)		
		Departm	ent of Physics, Maitreyi			
		College,	South Campus			
			ty of Delhi, New Delhi			
09/06/2023	Ballistic Pendulum & Projectile		am Juneja	B.Sc. II Sem		
2023	Motion	Associate	e Professor	(67)		
		_	ent of Physics, Maitreyi			
College, Sou			South Campus			

		University of Delhi, New Delhi	
05/06/	Black Body Radiation:	Dr. Prajwalit Shikha	B.Sc. II Sem
2023	Determination of Stefan's	Assistant Professor	(60)
	Constant & Ohm's Law	Department of Physics, Maitreyi	
		College, South Campus	
		University of Delhi, New Delhi	
13/10/	Half and Full Wave Rectifier	Dr. Poonam Juneja	B.Sc. IV Sem
2023		Associate Professor	(50)
		Department of Physics, Maitreyi	
		College, South Campus	
		University of Delhi, New Delhi	

2. List of New Practical introduced in different departments

2. List of I	New Fractical introduced in different departments
Department	Details of Experiments
Physics	To find out the refractive index of liquid (Hg)
	Different wave formation using CRO
	To find out the resolving power of prism
	To find out the frequency of ac mains using Melde's experiment
	To find out the wavelength of laser light using transmission grating
	To determine the width of single slit from the study of diffraction pattern
Chemistry	Hands on Training to determine the concentration of KMnO4 by colorimetrically
	Conductometric titration
	To determine of Hardness of Water
	• Preparation of <i>m</i> -dinitrobenzene, <i>p</i> -nitroacetanilide
	pH metric titration
Botany	Preparation of hoagland medium and aqueous culture
	Separation of amino acids by paper chromatography
	Preparation of Explant and culture technique
	Measurement of RQ value of different seeds through Ganong's respirometer
Zoology	Quantitative estimation of sugar and Protein
	Microtomy
	Polyacrylamide gel electrophoresis
	Thin layer Chromatography and Column Chromatography

### 3. Publications

### **Physics**

- Awasthi S, Yadav TP, Awasthi K. 2023. Notable electrical and mechanical properties of polyacrylamide (PAM) with graphene oxide (GO) and single-walled carbon nanotubes (SWCNTs). Int Polymer Processing. (1-10), <a href="https://doi.org/10.1515/ipp-2022-4295">https://doi.org/10.1515/ipp-2022-4295</a>.
- Babu S, Jeet R, Kumar A, Kumar A, **Varma A**. 2023. Parametric Instability of an X-mode laseroff a lower hybrid wave. Ir. J. Sci. Tech. Trans. A: Science. 46, 1719–1726.
- Kumar A, Kumar A, **Mishra SP**, **Varma A.** 2023. Electron Bernstein wave aided cosh-Gaussian laser beam absorption in plasma. Optik. 273, 170436.
- Kumar A, **Mishra SP**, Kumar S, Kumar A, **Varma A**. 2023. Excitation of electron Bernstein wave by nonlinear interaction of two copropagating Hermite-Gaussian laser beams in collisional plasma with static magnetic field. Opti. Quant. Elect. (Accepted).
- Kushwaha AK, Chauhan S, Mishra SP, Yadav VK, Ahmed R, Ul Haq B. 2023. Interatomic interactions, zone-centre phonons and elastic properties of mixed pyrochlore

- A2GaSbO7 (A= Y, Dy and Gd): a theoretical study. Bull Mater Sci. 46(1):25.
- **Kushwaha AK**, Genç AE, Özdemir AL, Güler M, Uğur ŞU. 2023. Study of Structural, optoelectronic and elastic properties of MAX phase of Ti2BrX (X= B, C and N) by density functional theory. Inorg Chem Commun. 150:110515.
- **Kushwaha AK**, Khan W, AlQahtani HR, Laref A, Monir ME, Nya FT, Chowdhury S, Alghamdi EA, Huang HM, Xiong YC, Yang JT. 2023. First-principles assessments of the electronic, and magneto-optical characteristics of Fe–Mn co-doped anatase TiO2 for photocatalysis applications. Solid State Commun. 360:115059.
- **Srivastava P.** 2023. Effect of Lead Fluoride on Spectroscopic Properties of Dy<sup>3+</sup> Doped Borate Based Glasses for Yellow Luminescent Device Application . J. Appl. Spect. 90(1): 141-150.
- Yadav TP, **Awasthi KA**. 2022. Carbon nanomaterials: Fullerene to graphene. Transactions of the Indian National Academy of Engineering (2022)7:715–737.
- Varma A, Kumar A. 2022. Electron Bernstein wave aided heating of collisional nanocluster plasma by nonlinear interactions of two super-Gaussian laser beams. Laser Phys. 32, 016001
- Gagui S, Meradji H, Ghemid S, Naeem S, Haq BU, Ahmed R, **Kushwaha AK**. 2023. Analysis of phase stability, elastic, electronic, thermal, and optical properties of Sc1-xYxN via ab initio methods. J Mol Model. (1):14.
- Shaw AK, Chakraborty A, Kamran M, Ghara R, Choudhuri S, Ali SS, Pal S, Ghosh A, **Kumar J**, Dutta P, Sarkar AK. 2023. Probing early Universe through redshifted 21-cm signal: Modeling and observational challenges. J Astrophys Astron. 44(1):4.
- Babu S, Jeet R, Kumar A, Kumar A, Varma A. 2022. Decay instability of X-mode laser into upper hybrid and electron Bernstein waves in a plasma. Optical and Quantum Electronics 54, 710.
- Karwasara H, Bhamu KC, Kang SG, **Kushwaha AK**, Rai DP, Sappati S, Sahariya J, Soni A. 2022. Ab-initio investigations for structural, mechanical, optoelectronic, and thermoelectric properties of Ba2SbXO6 (XNb, Ta) compounds. J Alloys Compd. 893:162332.
- Kumar A, Kumar A, Mishra SP, Yadav MS, **Varma A**. 2022. Plasma wave aided heating of collisional nanocluster plasma by nonlinear interaction of two high power laser beams. Optical and 2017. Adv Space Res. 69(7):2659-70.
- Kumar A, Pratap V, Kumar S, Singh AK. 2022. Atmospheric aerosols properties over Indo-Gangetic Plain: A trend analysis using ground—Truth AERONET data for the year 2009
- Moutassem M, Seddik T, Mohammed DS, Batouche M, Khachai H, Khenata R, Ahmed R, Srivastava V, Bouhemadou A, **Kushwaha AK**, Bin Omran S. 2022. Metal to semiconductor transition and figure of merit enhancement of Li2CuAs compound by Na substitution. Bull Mater Sci. 45(3):110.
- Pooja K, Pandey AP, **Awasthi K**, Tripathi M, Chawla P. 2022. Development of polymer electrolyte based on graphite/MWNTs fillers for sustainable dye-sensitized solar cell. Chemical Papers 76:7623-7632.
- Shivesh K, Alam I, **Kushwaha AK**, Kumar M, Singh SV. 2022. Investigating the theoretical performance of Cs2TiBr6 based perovskite solar cell with La doped BaSnO3 and CuSbS2 as the charge transport layers. Int J Energy Res. (5):6045-64

### **Published Edited Books:**

• Materials Science: A Field of Diverse Industrial Applications, Editors: Arti Srivastava,

- Mridula Tripathi, **Kalpana Awasthi** and Subhash Banerjee pp.1-170; Bentham Science (2023).
- Material Science: Future Aspects, Editors: **Kalpana Awasthi**, Arti Srivastava and Mridula Tripathi, Publisher: NOVA Science Publisher Inc, New York, ISBN: 978-1-53619-798-3 (2022) pp 1-261.
- Physical and Biological Sciences: Know- how Social Solicitation, Editors: Mridula Tripathi, Arti Srivastava, **Kalpana Awasthi**, Hemlata Pant, Priyanka Chawla Publisher: Krishna Computer Sansthan, Prayagraj, ISBN: 978-81-956345-9-0 (2022) pp.1-331.
- Perspective of Environmental Sciences, Editors: Deepak Kumar Srivastava, N. L. Singh, S. P.Mishra, Publisher: Global Academic Society of India, Lucknow, ISBN: 978-81-959099-0-2 (2022) pp. 1-195.

### **Botany**

- Ravi Kumar Yadav, Nishant Singh, Manish Kumar Singh, Jyotsana Raghuvanshi and Zeba Azim. 2024. Green synthesis of nano iron oxide using *Emblica officinalis* L.fruit extract and its impact on growth, chlorophyll content and metabolic activity of *Solanum lycopersicum* L. Journal of applied biology and biotechnology. Vol. X(XX), 1-9. DOI. 10.7324/JABB.2024.165651.
  - Ravi Kumar Yadav, Nishant Singh, Manish Kumar Singh and Zeba Azim. 2023. Role of green synthesized nano iron oxide in alleviating the cadmium toxicity in Brassica oleracea var.italica seedlings. Plant Nano Biology. Vol 6. https://doi.org/10.1016/j.plana.2023.100055.
  - Ravi Kumar Yadav, Nishant Singh, Manish Kumar Singh, Jyotsana Raghuvanshi and Zeba Azim. 2023. Green synthesis of nano zinc oxide using *Phyllanthus emblica* 1. Fruit extract and its impact on growth, pigment content and antioxidant enzyme activity of *brassica oleracea var italica*. Biochem. Cell. Arch. Vol. 23, No. 2. https://doi.org/10.51470/bca.2023.23.2.000.
  - Rashmi Singh, Madhu Shastri, A. K. Singh and P. N. Dongre. 2023. Approaches towards integrated disease management of sheath blight disease of corn. Current Agriculture Research Journal. Vol 11(3). https://doi.org/10.12944/CARJ.11.3.08
  - Rashmi Singh, Madhu Shastri, A. K. Singh and P. N. Dongre. 2023. Sheath blight disease and its bio management. Journal of Asiatic Society of Mumbai. Vol 97 (4) 133-138.
  - Rashmi Singh, Madhu Shastri, A. K. Singh and P. N. Dongre. 2022. Study of Disease severity of sheath blight symptoms of Corn in Purvanchal, (U.P.), India. NIU International Journal of Human Rights. vol 9 July (I) 64-70

### Books

### **Author-Rashmi Singh**

- 1. Microbiology and Plant Pathology. 2022. A Text Book. Krishna Publication. ISBN: 978-93-91152-61-1.
- 2. Archegoniate and Plant Architecture. 2022. A Text Book. Krishna Publication: ISBN No.: 978-93-91152-29-1.
- 3. Economic Botany, Ethnomedicine and Phytochemistry. 2023. A Text Book. Krishna Publication: ISBN No.; 978-93-94511-93-4

### Chemistry

- Mishra A, Jaiswal A, Sharma AK, Pandey YK, Singh J, Singh J. 2023. A Visible-light-triggered & rhodamine-b catalyzed eco-friendly synthesis of benzopyrano [2, 3-c] pyrazoles. Catalysis Letters. 2023 Jan 26:1-0. DOI: 10.1007/s10562-023-04279-1
- Jaiswal A, Sharma AK, Jaiswal S, Mishra A, Singh J, Singh J, Siddiqui, I.R. 2023.

- Visible lightinduced eco sustainable synthesis of quinolines catalysed by Eosin Y. J. Heterocyclic Chem. DOI: 10.1002/jhet.4653
- **Prakash O**, Tiwari S, Maiti P. 2022. Fluoropolymers and their nanohybrids as energy materials: application to fuel cells and energy harvesting. ACS omega. (7-39):34718-40.
- **Prakash O**, Bihari S, Tiwari S, Prakash R, Maiti P. 2022. Dehydrohalogenated poly (vinylidene fluoride)-based anion exchange membranes for fuel cell applications. Mat. Today Chemistry. (23-1):100640.
- Singh AP, **Prakash O**, Kumar S, Shukla A, Maiti P. 2022. Poly (lactic acid-co-glycolic acid) as sustained drug delivery vehicle for melanoma therapy. Mat. Today Comm. (31):103661.
- Bhardwaj R, **Prakash O**, Tiwari S, Maiti P, Ghosh S, Singh RK, Maiti P. 2022. Efficient herbicide delivery through a conjugate gel formulation for the mortality of broad leaf weeds. ACS omega. (7-23):19964-78
- Kanaujiya VK, Tiwari V, **Baranwal S**, Srivastava V, Kandasamy J. 2022. Denitrosation of aryl-N-nitrosamines via trans-nitrosation strategy using ethanethiol and p-toluenesulfonic acidunder mild reaction conditions. Synlett, AAM.
- Jaiswal D, Tiwari J, Singh S, Singh J, Singh J. 2021. Visible-light-mediated decarboxylative thiocyanation of cinnamic acids: an efficient photocatalytic approach to the synthesis of (e)- vinyl thiocyanates. Cat. Lett.. (151): 1738-1744.
- Yadav PK, **Prakash O**, Ray B, Maiti P. 2021. Functionalized polythiophene for corrosion inhibition and photovoltaic application. J. Appl. Poly. Sci.. 138(44):51306.

### **Books**

- Bio-organic and Medicinal Chemistry Editors: S. Goyal, D. Pandey, P.P. Bhattacharya, D.Kumar, S. Yadav, Ranvir Singh, V.K.Yadav, Publisher: Krishna Prakashan, Meerut ,ISBN No. 78-93-91152-76-5 (2022).
- Fundamental of Chemistry, Editors: S. Goyal, D. Pandey, P.P. Bhattacharya, D. Kumar, S. Yadav, Ranvir Singh, **V.K.Yadav**, Publisher: Krishna Prakasha Meerut, ISBN No. 978-93- 91152-76-5 (2022).
- Chemical Dynamics and Coordination Chemistry, S. Goyal, D. Pandey, P.P. Bhattacharya, D. Kumar, S. Yadav, Ranvir Singh, **V.K.Yadav**, Publisher: Krishna Prakashan, Meerut, ISBN No.978-93-91152-76-5(2022).

### Zoology

- Kushwaha A, Thakur MK. Suv39h1 Silencing Recovers Memory Decline in Scopolamine-Induced Amnesic Mouse Model. Mol Neurobiol. 2023 Aug 26. doi: 10.1007/s12035-023-03570-x. PMID: 37626270.
- Verma, Vivek et al. "Impact of a Single Episode of Different Intensity of White Light Pulse at Night on Masking Response in the Diurnal Mammal, Funambulus pennantii." Chronobiol Med. 2023;5(3):108-116
- Malviya S.J. and Soni R. (2023): Revolutionizing Tomato Jassid (Amrasca biguttula biguttula) Control: A Synergistic Approach with Eco-friendly Botanicals and Precision Chemicals. Annals of Natural Sciences, Vol. 9[4]: December, 2023: 1-12.

### 4. Training Received

### **Physics**

- **Mr. Manoj Kumar Vishwakarma:** Refresher Course in Physics, organized by Teaching Learning Centre Ramanujan College, University of Delhi, New Delhi, 09 -23 June, 2023.
- **Dr. Jais Kumar:** Faculty Induction Programme organized by Human Resource Development Centre (HRDC) Aligarh Muslim University, Aligarh, 12 July to 17 August 2023.
- **Dr. Akhilesh Kumar:** Faculty Induction Programme organized by Human Resource Development Centre (HRDC) Aligarh Muslim University, Aligarh, 01 November to 05 December 2022.
- **Dr. Dhananjay Kumar Gaur**: Refresher Course on Environmental Studies organized by Human Resource Development Centre (HRDC) Aligarh Muslim University, Aligarh 16-29 August 2023.
- **Dr. Ashish Varma:** Refresher course in Physics, organized by Teaching Learning Centre Ramanujan College, University of Delhi, New Delhi, 28 July -11 August, 2022.
- **Dr. Ashish Varma:** Refresher course in Physics, organized by Teaching Learning Centre Ramanujan College, University of Delhi, New Delhi, 27 February -13 March, 2023.
- Dr. Ashish Varma: Refresher Course in "Managing Online Classes & Co- creating MOOCS, organized by Teaching Learning Centre Ramanujan College, University of Delhi, New Delhi, 11 25 November, 2023.

### **Botany**

- **Dr. Ravi Kumar Yadav.** Workshop on Basic techniques of HPLC and it's application in research. Organized by Centre of Biotechnology, Nehru science Centre, University of Allahabad. 29-30 August 2022.
- **Dr. Ravi Kumar Yadav.** Lichens in an ecosystem. Organized by NBRI, Lucknow. 6-7 February 2023.
- **Dr. Ravi Kumar Yadav.** Refresher Course in Botany, organized by Teaching Learning Centre Ramanujan College, University of Delhi, New Delhi, 29 July-13 August, 2023.
- **Dr. Ravi Kumar Yadav.** Basic Training Program in Nano Science and Technology. Organized by Centre for Nano Science and Engineering, Indian Institute of Science, Banglore. 20-22 June 2022.
- **Dr. Ravi Kumar Yadav.** Professional Development Programme on Implementation of NEP-2020 for university and college teachers. Organized by IGNOU. 17-25 October 2022.
- **Dr. Rashmi Singh.** Refresher Course in Botany, organized by Teaching Learning Centre Ramanujan College, University of Delhi, New Delhi, 29 July-13 August, 2023.
- **Dr. Rashmi Singh.** Professional Development Programme on Implementation of NEP-2020 for university and college teachers. Organized by IGNOU. 21-31 December 2022.
- **Dr. Shefali Singh.** Refresher Course in Botany, organized by Teaching Learning Centre Ramanujan College, University of Delhi, New Delhi, 29 July-13 August, 2023.
- **Dr. Shefali Singh.** Professional Development Programme on Implementation of NEP-2020 for university and college teachers. Organized by IGNOU. 21-31 December 2022.
- **Dr. Shefali Singh.** Basic Training Program in Nano Science and Technology. Organized by Centre for Nano Science and Engineering, Indian Institute of Science, Banglore. 20-22 June 2022.

### **Chemistry**

• **Dr. Dhirendra Kumar**. FIP. 1/9/2022 to 28/9/2022. Jamia Millia Islamia, New Delhi

- **Dr. Nikhil Singh**. FIP. 1/9/2022 to 28/9/2022. Jamia Millia Islamia, New Delhi
- Dr. Om Prakash. FIP. 1/9/2022 to 28/9/2022. Jamia Millia Islamia, New Delhi
- Dr. Deepali Jaiswal. FIP. 1/11/2022 to 29/11/2022. Jamia Millia Islamia, New Delhi
- Dr. Shikha Mehta. FIP. 1/11/2022 to 29 /11/2022. Jamia Millia Islamia, New Delhi
- Dr. Jyoti Maurya. FIP. 1/11/2022 to 05/12/2022. Aligarh Muslim University, Aligarh
- Dr. Siddharth Barnwal. FIP. 15/11/2023 to 19/12/2023. Aligarh Muslim University, Aligarh
- Dr. Amit kumar Sharma. FIP. 15/11/2023 to 19/12/2023. Aligarh Muslim University, Aligarh
- Dr. Rajneesh Diwedi. FIP. 15/11/2023 to 19/12/2023. Aligarh Muslim University, Aligarh
- Dr. Arvind Pandey. FIP. 15/11/2023 to 19/12/2023. Aligarh Muslim University, Aligarh
- Dr. Jyoti Tiwari. FIP. 12/07/2023 to 17/08/2023. Aligarh Muslim University, Aligarh
- **Dr. Nikhil Singh**. Refresher Course. 04/08/2023 to 08/08/2023. Jamia Millia Islamia, New Delhi

### Zoology

• **Dr. Anju Verma-** Interdisciplinary refresher course in Sustainable Development and Climate Change organized by UGC-HRDC, University of Allahabad, 23 February-08 march, 2023.

### • Dr. Deepak Verma-

Professional Development Programme on "Implementation of NEP 2020 for University and College Teachers" held from 05 December 2022 – 13 December 2022.

-UGC Sponsored Online Faculty Induction Programme, Organised by Aligarh Muslim University, Aligarh 06 February - 14 March 2023.

### Dr. Vivek Verma-

Faculty Induction Programme conducted by Jawaharlal Nehru University held from 9th January 2023 to 6th February 2023 and obtained A grade only

UGC Approved Short Term Professional Development Programme on Professional Development Programme on 'Implementation of NEP 2020 for University and College Teachers' held from 07th to 15th October, 2022.

### Dr. Akanksha Kushwaha-

Participated in Faculty induction program from Feb 6 to March 14, 2023, held in online mode at HRDC-AMU, Aligarh.

Attended professional development program on Implementation of NEP 2020 for University and college teachers from Nov 7 to Nov 16, 2022 through SWAYAM organised by IGNOU.

5. Details of institutes/ field visit organized during first year

Visiting	Training detail	Date	Class	No. of	Organizer
Institute/ field				Benef-	
				iciaries	
	Depa	rtment: Zool	ogy		
Department of	Institute visit with	13/07/2023	B.Sc.	40	R.Soni
Biochemistry	introduction of		IV		
University of	histochemistry of cancer		Sem		
Lucknow	•				
BS Institute of	Working detail of	14/07/2023	B.Sc.	40	R.Soni
Palaeoscience,	electron microscope and		IV		
Lucknow	carbon dating.		Sem		
	C				
	Depar	tment: Chemi	istry		
IIT(BHU)	Institute visit in Central		B.Sc.	60	Dr. Dhirendra Kumar
Varanasi	Instrumentation Facility		Vth		Dr. Nikhil Kumar
	•		Sem		Singh

					Dr. Sidharth Baranwal
	Depai	rtment of Bot	any	•	
Local Visit	The students visited nearby agricultural field and collected many plant diseases.	31/01/2023	B.Sc. IIIrd Year	60	Dr. Rashmi Singh
Birbal Sahni Institute of Palaeobotany, Lucknow	By visiting this institute students were being able to understand the process of fossilization. Also they understand the scope of palaeobotany	13/07/2023	B.Sc. IInd Sem	40	Dr. Ravindra Pandey
CIMAP, Lucknow	The student visited the park and know about various medicinal plants, extraction unit for essential oils.	14/07/2023	B.Sc. IVth Sem	40	Dr. Saumya Mishra
	Department of Ph	nysics			
Department of Physics, Allahabad University, Prayagraj	Visit to electronics & optics lab and Spectroscopy research lab	18/06/ 2023	B.Sc. IV Sem	33	Dr. S.P. Mishra Dr. A. Varma

### 6. Details of organized workshops and winter school/summer school

Workshop/ Winter school	Topic	Date	Online/ offline	Class and no . of Benef- iciaries	Organizer
Summer School (Botany)	Cytological and Histological Techniques	17-23 <sup>rd</sup> May 2023	Off- line	B.Sc. III Sem	Dr. Shefali Singh and Dr. Ravi Kumar Yadav
Workshop (Chemistry)	spectroscopic techniques	25-30 <sup>th</sup> May 2023	Off- line	B.Sc. I and IIIrd 132	Dr. Vinod Kumar Yadav, Dr. Abhimanyu Yadav
Winter School (Chemistry)	Winter School on Equipment Handling &training	13-20 <sup>th</sup> February 2023	Offline	B.Sc.I (300)	Dr. Vinod Kumar Yadav, Dr. Abhimanyu Yadav
Winter School (Physics)	Fundamental of Optics and Applied Electromagnetics	08-14 Feb. 2023	offline	B.Sc. III Semester (81)	Dr. S. Singh & Dr. A. Varma

Workshop (Physics)	Basic Physics: Tools and Techniques	16-18 May 2023	Offline	B.Sc. II Semester (80)	Dr. Priyanka Srivastava & Dr. Akhilesh Kumar
Workshop (Zoology)	workshop on DNA Isolation	07 June 2023	Offline	B.Sc. IV Sem. (80)	Dr. Shubha Shrivastava
Workshop (Zoology)	Biological Database and its application	21 June 2023	Offline	B.Sc. IV Sem. 85	Dr. Deepak Verma
Workshop (Zoology)	study of Drosophila mutant and its significance	14 Decembe r 2023	Offline	B.Sc. I Sem. 76	Dr. Vivek Verma
Workshop (Zoology)	Isolation of DNA fragment by Agarose gel Electrophoresis	12 October 2023	Offline.	B.Sc. II Sem 180	Dr. Akanksha Kushwaha

### 7. Quiz-Poster Competition/ science exhibitions details

		Physics				
Activity	Date	Programme details	Class and no. of Beneficiaries	Organizers		
National Energy	14 Dec.	Essay, poster,	B.Sc.	Dr. S. Singh		
Conservation Day-	2022	presentation	(88)	Dr. A.Kumar,		
2022				Dr. A. Varma		
				Dr. J. Kumar		
Birth Anniversary	31 Dec.	Online Physics	B.Sc. III	Dr. K. Awasthi		
of Padam Shree	2022	Quiz	(60)			
Prof. O.N.						
Srivastava						
National Science	28 Feb.	Essay,	B.Sc.	Dr. S.P. Mishra		
Day -2023	2023	presentation	(40)	Dr. A. Kumar		
National	12 May	Essay	B.Sc. IV Sem	Dr. P. Srivastava		
Technology Day-	2023		(40)			
2023						
World Environment	6 June 2023	Online Quiz	B.Sc.	Dr. A. Varma		
Day -2023			(140)			
Birth Anniversary	13 Oct. 2023	Essay	B. Sc.	Dr. K. Awasthi		
of Dr. APJ Abdul			(30)	Dr. P. Srivastava		
Kalam						
Botany						
Activity	Date	Programme details	Class and no. of Beneficiaries	Organizers		
Know your Indian	24th	Quiz	B.Sc.	Dr. Rashmi Singh		

Scientist	February	Competition	(50)			
Contribution	2023					
Importance of	18 May	Exhibition	B.Sc. III	Dr. Saumya		
Medicinal Plants	2023		(60)	Mishra and Dr.		
				Ravindra Pandey		
World Environment	6 June 2023	Poster and Slogan	B.Sc.	Dr. Ravi Yadav		
Day -2023			(80)			
World Ozone Day	16	Science awareness	B.Sc.	Dr. Rashmi Singh		
	Sept.2023	play	(30)			
Birth Anniversary	13 Oct.	Quiz	B. Sc.	Dr. Geeta Yadav		
of Dr. APJ Abdul	2023	Competition	(60)	Dr. Shefali Singh		
Kalam		_				
Zoology						
Quiz Competition	25 May	Quiz	B.Sc.	Ratnesh Kumar		
for U.G. Students	2023	Competition	(75)	Soni		

### 8. Project work details:

		Class and					
S. No.	Department	no.					
		Beneficiaries					
	Department: Botany						
1.	Project work in Plant physiology (Transpiration rate, Photosynthesis rate and respiration rate)	B.Sc. II (80)					
2.	Project work in Plant diseases management (Late blight of Potato, Red rot of sugarcane and stem gall of coriander)	B.Sc. III (80)					
3.	Isolation of Soil Bacteria and their identification	B.Sc. I (10)					
4.	Studies on River Pollution of District Bhadohi	B.Sc. V (10)					
	Department: Physics						
5.	Preparation of graphene oxide using agro waste i.e. rice husk	B.Sc. III (10)					
6.	Impact of graphene oxide on plant growth	B.Sc. V (10)					
7.	Laser induced scattering in leaf extract in organic medium	B.Sc. III (10)					
8.	Assembling of electronic devices on bread board	B.Sc. V (10)					
	Zoology						
9.	Biochemical analysis of Gyanpur Hariharnath pond	B.Sc. III (20)					
10.	seasonal variability of phyto and zooplankton of Gyanpur hariharnath pond	B.Sc. I (20)					
11.	Morphogenetic trait variations among the population of Bhadohi district.	B.Sc. IV (20)					
	Chemistry						
12.	Hardness of Water and It's Determination	B.Sc. III (60)					
	Interdisciplinary Project						
Botany- Chemistry	separation of amino acids and plant pigments by paper chromatography	B.Sc. IV (60)					
Physics- Chemistry	pH-metric titration: Principle and Applications	B.Sc. III (90)					

### 9. Outreach activities:

S.No.	Target Audience	Topic	Date	No .of beneficiary
1.	Laboratory Staff Training	Preservation of	01/02/2023	05
		collected materials		
2.	Supporting Staff	Safety measures	08/12/2023	06
3.	School students (11 <sup>th</sup> standard)	Science Laboratory	16/05/2023	54

		Visit		
4.	Other College Students	Hands on Training	12/10/2023	52
		in some Life		
		Science		
		Experiments		
5.	Faculty and Students	Guest Lecture on	23/02/2023	80
		Intellectual Property		
		Rights		

### ${\bf 10.\ Details\ of\ invited\ lectures\ (Online/offline\ mode)\ organized\ up to\ December\ 2023:}$

Resource Person	Designation &Affiliation	Lecture Topic	Date and time	Platfor m (Online /offline)	Class	No. of Bene ficia ries	Organizer
	Ι		ent: Botan		T = 0		I
Dr. Indresh Kumar Pandey	Assistant Professor, Dr. Shivanand Nautiyal Govt. P. G. College, Karnprayag, Chamoli, Uttarakhand	Millets: The miracle superfood; Opportunities for the Entrepreneurship	04/03/2 023	Online	B.Sc.	115	Dr. Ravi kumar Yadav and Dr. Shefali Singh
Dr. Prabhat Srivastava	Assistant Professor, K S saket P. G. College, Ayodhya, U.P.	Hydroponics: A method to grow plant in aqueous medium	27/03/ 2023	Offline	B.Sc. IVth Sem	60	Dr. Ravi kumar Yadav and Dr. Shefali Singh
Dr. U. N. Tripathi	Regional Director, IGNOU, Varanasi	Bio-risk and Bio- safety management	29/04/ 2023	Offline	B.Sc.	80	Dr. Rashmi Singh
Dr. Bhagat S. Bhakuni	Assistant Professor,Deptt. of Chemistry, Kirori Mal College, University of Delhi	Beat the Plastic Pollution With Solution	05/06/2 023	Online	B.Sc.	80	Dr. Rashmi Singh
Dr. D. P. Singh	Principal Scientist, ICAR	Biological Data analysis	16/12/ 2023	Offline	B.Sc. III and Vth Sem	60	Dr. Rashmi Singh
D 45	In a	Departmen			T = ~		I 5
Prof P. K. Dutta	Professor (HAG) Motilal Nehru National Institute of Technology Allahabad	Polymer Spectacular world of macromolecule molecule	08/05/2 023	Online	B.Sc.	90	Dr. Abhimanyu Yadav
Dr. Prakash	Assistant Professor,	Fluorescent spectroscopy	28/06/ 2023	Offline	B.Sc.	84	Dr. Abhimanyu Yadav

Chandra	Department of Chemistry, Bundelkhand University Jhansi	and its Applications					
Dr. Ajay Verma	Assistant Professor, Department of Chemistry University of Allahabad, Prayagraj	Overview of spectroscopic techniques used in the organic synthesis	28/06/ 2023	Offline	B.Sc.	84	Dr. Abhimanyu Yadav
		Departme	ent: Physic				
Dr. T. P. Yadav	Associate Professor, Department of Physics, Allahabad University, Prayagraj	Importance of Hydrogen Energy in Near Future	18/05/ 2023	Online	B.Sc. IV Sem + Rese arch Scho lars	(60)	Dr. K. Awasthi
Dr. Mridula Tripathi	Associate Professor, Department of Chemistry, CMP Degree College, Prayagraj	Nanotechnology : A Future Aspects	20/05/ 2023	Offline	B.Sc. +M. Sc. II Sem.		Dr. S. P. Mishra & Dr. A. Kumar
Dr. Rohit Ranjan Shahi	Assistant Professor Department of Physics, Central University of South Bihar, Gaya	High Entropy Alloys for Materials for Energy Applications	14/12/ 2023	Online	B.Sc. V Sem	(70)	Mr. M.K. Vishwakarma & Dr. A. Kumar
		Departme			T _	T	T
Prof. Ramesh Chandra	Department of Neurobiology University of Maryland Baltimore, USA	Altered Mitochondrial dynamics in brain reward circulatory in cocaine addiction	31 July 2023	Offline	B.Sc. III Sem.	65	Dr. Deepak Verma

### 11. Books/ Journals Subscribed from the grant

Department	S. No.	Name of the Book	Author	Number
	1.	Plant Breeding	B. D. singh	01
	2.	Microbiology	Dubey and Maheshwari	01
	3.	Cell Biology	Verma	01
	4.	Microbiolgy	Arora	01
	5.	Bioinformatics	Bayevaus	01
	6.	Biostatistics	Prasad	01

	7.	Organic Evolution	Rastogi	01
Botany	8.	Biotechnology	Dubey	01
	9.	Cell and Molecular Biology	Gupta	01
	10.	Plant Tissue Culture	Rajdan	01
	11.	Gene X	Krebs	01
	12.	Biophysics	Pranav Kumar	02
	13.	Biotechnology	Pranav Kumar	01
	14.	Angiosperm	B.P. Pandey	01
	15.	Plant Pathology	B.P. Pandey	01
	16.	Ecology and Environment	Singh	01
	17.	Economic Botany	Jordan	01
	18.	Invertebrate Zoology	Jordan Verma	02
	19.	Chordate Zoology	Jordan Verma	02
7. 1	20.	Chordate Embryology	Verma	02
Zoology	21.	Cell Biology	Veer Bala Rastogi	02
	22.	Genetics	Veer Bala Rastogi	02
	23.	Cell Biology and Genetics	Verma and Agarwal	01
	24.	Principles of molecular biology	Veer Bala Rastogi	01
	25.	Zoology NEP IV Sem	Arya	05
	26.	Zoology NEP III Sem	Agarwal	03
	27.	Organic Chemistry	Morrison	01
	28.	Organic Chemistry	Bruice	01
	29.	Organic Chemistry Vol.1	Finar	02
	30.	Organic Chemistry Vol.2	Finar	02
Chemistry	31.	A guide book for mechanism of Organic Chemistry	Sykes	01
	32.	Inorganic Chemistry Principle of Structure and reactivity	Huheey	01
	33.	Inorganic Chemistry	Miessler	01
	34.	UGC CSIR Chemical Science	Rakesh	01
	35.	Fundamentals of Chemistry Vol.II	Jagdamba	01
	36.	NEP Math, Physics and Newtonian Mech. I SE		02
Physics	37.	NEP Physics		02
	38.	Fund. Of modern physics		01
	39.	Optics		01
	40.	Thermal Physics		01
	41.	Advance Quantum Mechanics		01
	42.	Classical Mechanics		01
	43.	Elements of Spectroscopy		01
	44.	Ess. Las. And Non linear optics		02
	45.	Hand Book of Electronics		02
	46.	Mathematical Physics		01
	47.	Relativistic Mechanics		01
	48.	Solid State Physics		01
	49.	Statistical Mechanics		01
	50.	Principles of Electronics	V. K. Mehta	01

51.	Nuclear Physics	Tayal	02
52.	Atomic and Mol.Spectra	Rajkumar	01
		Total	71

Photo Gallery for the activities organized under DBT Star College Scheme

BOTANY
Hands on Training



### **Interdisciplinary Workshop**









### Minor Research Project



### **Guest Lecture**







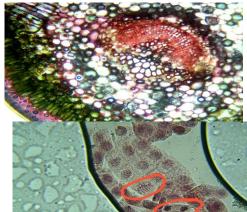












### Photo Gallery for the activities organized under DBT Star College Scheme $\underline{Physics}$









**Invited Lecture** 



Virtual Lab Experiments Online Lecture Cum Hands on Training



Winter School



**Educational Visit** 



**Minor Research Project** 

### Workshop

### Photo Gallery for the activities organized under DBT Star College Scheme $\underline{Chemistry}$

### Hands on Training



### **Guest Lecture**



### **Interdisciplinary Workshop**



### Workshop



### Field Visit



# Photo Gallery for the activities organized under DBT Star College Scheme Zoology Hands on Training













### Workshops

















### **Guest Lecture**



### Field Visit



### **Outreach Activities**







Lab Visit By School Students of Bhadohi District

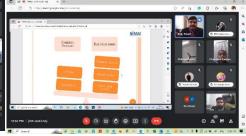


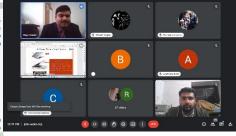
Hands on Training session organized for Keshav Prasad Govt. Girls Degree College, Aurai,
Bhadohi, U.P.



**Staff Training** 







### Awareness Programme on Intellectual Property Rights for Faculty and students Exhibitions/Quiz/Poster/ Science Play



**National Science Day** 



**World Ozone Day** 





**Exhibition on Medicinal Plants** 



**Quiz Competition** 



### प्रशिक्षण में विद्यार्थियों ने जाना पौधों के रंग व द्रव्य की विशेषता



केएनपीजी कालेज के वनस्पति विभाग में प्रशिक्षण लेते विद्यार्थी • जागरण

संवाद सहयोगी, ज्ञानपुर (भदोही): केएनपीजी कालेज ज्ञानपुर वनस्पति विज्ञान एवं रसायन विज्ञान विभाग में शनिवार को क्रोमैटोग्राफी विषय पर हेंड्स आन ट्रेनिंग का आयोजन हुआ। मुख्य अतिथि राजकीय महाविद्यालय चुनार मीरजापर के प्राचार्य डा.पीएन डॉगरे ने कहा कि ऋोमैटोग्राफी एक रासायनिक शक्किरण विधि हैं, जो रंगीन पदार्थों को अलग करती है। पेपर क्रोमैटोग्राफी में अणुओं के विभिन्न आकार के आधार पर वर्णक को अलग किया जा सकता है। हर कोई जानता है कि पत्तियों में क्लोरोफिल होता है जो हरा होता है लेकिन पौधों में वास्तव में अन्य वर्णक अणुओं की एक विस्तृत श्रृंखला भी होती है। कार्यक्रम की ट्रेनर डा. शेफाली सिंह 百 दीपाली जायसवाल ने इसको सैद्धांतिक विद्यार्थियों दी। दोनों ट्रेनर ने जानकारी प्रतिभागियों को इसकी प्रयोगात्मक क्रिया विधि सिखाई। कार्यक्रम का शुभारंभ प्राचार्य प्रो. रमेशचंद यादव द्वारा मां सरस्थती की मृतिं पर माल्यापंज के साथ किया गया।

### **News Paper Coverage**



### राष्ट्रीय विज्ञान दिवस पर प्रश्नोत्तरी में अंजली प्रथम

त्यधा

जानपुर, संवाददाता। काशी नरेश राजकीय स्नातकीत्तर महाविद्यालय के व्यस्पति विज्ञान विभाग में प्रकृत्वरा को राष्ट्रीय विज्ञान दिवस पर प्रश्नोत्तरी प्रतिवेशीत्ता का, आयोजन किया गया। इसमें डीवीटी स्टार कालेज के तहत आयोजित परीक्षा में छात्र-छात्राओं ने प्रतिभाग की।

स्नातकोत्तर

किया गया।

हाइड्रोपोनिक

कृषि की दी

जानकारी

ज्ञानपर। काशी नरेश राजकीय

सोमवार को डीबीटी स्टार कार्यक्रम

के तहत वनस्पति विभाग की ओर

से हाइड्रोपोनिक्सः फार्मिंग इन वाटर

विदाउट सॉइल पर एक दिवसीय

हैंडस ऑन ट्रेनिंग का आयोजन

मुख्य अतिथि पीजी कॉलेज

अयोध्या के डॉ. केएस साकेत ने

हाइड्रोपोनिक कृषि के बारे में

बताया। कहा कि इस विधि से

केवल पानी और न्युट्रिएंट्स का

उपयोग करते हुए उत्पादन किया जा

सकता है। उन्होंने हाइड्रोपोनिक

कृषि के तकनीकी पहलुओं की

जानकारी दी। हैंइस ऑन ट्रेनिंग

सेशन में छात्र-छात्राओं ने प्लास्टिक बॉटल का दुबारा इस्तेमाल करते हुए

न्युट्रिएंट मीडियम बनाकर पौधों को

उगाने की विधि सीखी। मुख्य

यादव, डॉ. प्रभात श्रीवास्तव, डॉ.

रश्मि सिंह आदि रहे। संवाद

महाविद्यालय में

विज्ञान वर्ग के स्नातक स्तर के छात्र-छात्राओं ने उत्साहित होकर प्रतिभाग किया। बहुवित्कपीय प्रकार के कुल 15 प्रश्नों के अहम योगदान पर आधारित थे।

# समाचार सार

केएनजीपीजी कालेज से शैक्षणिक भ्रमण पर लखनऊ जाते विद्यार्थी व शिक्षक 🏽 जागरण

शैक्षणिक भ्रमण पर रवाना हुए केएनपीजी कालेज के विद्यार्थी ज्ञानपुर (भदोही) : काशी नरेश राजकीय रनातकोत्तर महाविद्यालय ज्ञानपुर के बीएसँसी वनस्पति व जंतु विज्ञान प्रथम व चतुर्थ सेमेस्टर के छात्र–छात्राओं को गरुवार को दो दिवसीय शैक्षणिक भ्रमण पर लखनऊ ले जाया गया। महाविद्यालय परिसर से सबह परे उत्साह के साथ 40 विद्यार्थी बस से रवाना हुए। छात्र– छात्राओं को अन्य शैक्षणिक संस्थानों का भ्रमण कराकर ज्ञानवर्धन व नई तकनीक की जानकारी देने के उद्देश्य से भ्रमण कार्यक्रम आयोजित किया गया। नेतृत्व कर रही डा. रश्मि सिंह ने बताया कि प्रथम दिन गुरुवार को लखनऊ विश्वविद्यालय के बायों कमेस्ट्री लैब में वहां चल रही प्रायोगिक गतिविधियों के साथ आधुनिक उपकरणों आदि के बारे में जानकारी दी गुई। दूसरे दिन भी कई संस्थानों में भ्रमण कराया जाएगा । डा . रवींद्र पांडेय, डा . रवि यादव, डा . सौम्या मिश्रा, डा . आकांक्षा

### संवाद सहयोगी, ज्ञानपुर (भदोही) : में होने वाले सभी व्याख्यान एवं काशी नरेश राजकीय स्नात्कोत्तर महाविद्यालय ज्ञानपुर में रसायन विज्ञान विभाग की ओर से

कुशवाहा व धर्मेंद्र मालवीय व अन्य थे।

### औषधीय पौधों को संरक्षित करने की जरूरत

रसायनों का प्रयोग करते समय जानकारी जरूरी

ज्ञानपुर। काशी नरेश राजकीय स्नातकोत्तर महाविद्यालय में शनिवार को

डीबीटी स्टार स्कीम के तहत वनस्पति विभाग में बायो रिस्क एंड बायो सेफ्टी मैनेजमेंट विषय पर व्याख्यान का आयोजन किया गया। मुख्य वक्ता

क्षेत्रीय निदेशक इंग्नू डॉ. यूएन त्रिपाठी ने प्रयोगशाला में कार्य करते समय बरती जाने वाली सावधानियों की जानकारी दी। कहा कि रसायनों का

प्रयोग करते समय सही जानकारी का होना आवश्यक है। जिससे अच्छे

अवस्थी, जंतु विज्ञान विभाग के डॉ. रत्नेश सोनी, डॉ. दीपाली सहित अन्य विभागों के विभागाध्यक्षों ने भी जरूरी जानकारी साझा की। इस मौके

परिणाम संग सरक्षा बनी रहे। भौतिक विज्ञान विभाग की डॉ. कल्पना

पर जितेंद्र मौर्या, रविंद्र कुमार पांडेय, प्रतीक उपाध्याय आदि रहे। संवाद

### प्रयोग से तथ्यों को समझने में होती है आसानी

कार्यशाला में जानकारी देते डा.अभिमन्य खदवः जागरण

स्पेक्ट्रोस्कोपिक तकनीक विषय पर

पांच दिवसीय कार्यशाला का शुभारंभ

शुभारंभ करते हुए प्राचार्य डा.

पीएन डोंगरे ने छात्र-छात्राओं को

कार्यशाला में मिलने वाली जानकारी

को पुरे मनोयोग से समझने के लिए

प्रेरित किया। संचालक डा. दीपाली

जायसवाल ने कार्यशाला की रूपरेखा

पर प्रकाश हाला। कोर्स कोआर्डिनेटर

हा. अभिमन्यु यादव ने पांच दिनों

गुरुवार को किया गया।



रपेक्ट्रोस्कोपी के महत्व व

विभिन्न सिद्धांतों पर चर्चा

केएनपीजी कालेज के वनस्पति विभाग में समर कैंप के समापन पर छात्रा को प्रमाण पत्र देते प्राचार्य ब ,पीएन डोंगरे व शिक्षक 🏶 जरार

संबाद सहयोगी, ज्ञानपुर (भदोही) : प्रतिभाग किया। डा. शेफाली सिंह व प्रयोग ही विज्ञान का आधार है। जब डा. रविकुमार यदन ने प्रशिक्षक की महाविद्यालय ज्ञानपुर में वनस्पति विचान विधारा की और से आयोजित सात दिवसीय समर स्कूल कार्यक्रम के समापन पर मंगलवार को प्राचार्य द्रा पीएन दोंगरे ने यह बातें कहीं। इस तरह के आयोजनों को छात्र-

हिस्टोलाजिकल अध्ययन प्रताभाग कथा डा. शफ्तला स्वर व डा. रविकुसार यादव ने प्रशिक्षक की भूमिका निभाई। रिगोर्ट प्रस्तुतीकरण में डा. शेफाली ने बताया कि इस छात्र-छात्राओं ने कुछ पौधों के तने में होने वाली असामान्य द्वितीय वृद्धि

कार्यशाला के विषय की जानकारी

दी। वनस्पति विभाग की विभागाध्यक्ष

हा. रश्मि सिंह ने विद्यार्थियों को इस

प्रकार के आयोजनों से लाभान्वित

होने के लिए प्रोत्साहित किया। डा.

अयुब अहमद ने स्पेक्ट्रोस्कोपी

के महत्व एवं विभिन्न सिद्धांतों पर

प्रकाश डाला। आधुनिक युग में स्पेक्ट्रोस्कोपी के उपयोगिता को

विस्तार से समझाया। आभार हा.

विनोद कुमार यादव ने जताया। हा.

ओमप्रकाश, डा. निखिल सिंह, डा.

अमित शर्मा, हा. रजनीश द्विवेदी

### तथ्यों को प्रयोग का आधार मिलता है तभी उन्हें समझने में आसानी होती है। काशो नरेश राजकीय स्नातकोत्तर

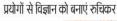
छात्राओं के लिए उपयोगी बताया। कोर्स कोआर्डिनेटर डा. रिश्म सिंह ने कहा समर स्कूल पौधों में सायटोलाजिकल और

व कोशिका में होने वाले समसत्री विभाजन का प्रयोगत्मक अध्ययन किया। विशेष अतिथि भौतिक विज्ञान के अस्मिरेंट पोफेसर हा एसपी क आसस्टट प्राफसर हा. एसमा मिश्र ने कहा कि डीबीटी स्टार कालेज स्कीम के अंतर्गत आयोजित हो रहे कार्यक्रम ने ग्रामीण परिवेश के बच्चों में विज्ञान के प्रति अभिरुचि उत्पन्न की है। प्रतिभागी छात्र-हात्राओं को प्रमाण पत्र दिया गया आधरित था। बीएससी द्वितीय डा. रवींद्र कुमार पाँडेय व ड सेमेस्टर के 70 छात्र-छात्राओं ने मिश्रा व अन्य प्राध्यापक थे।

### अतिथि का प्राचार्य प्रो. पीएन डोंगरे ने स्वागत किया। डॉ. रवि कुमार

### भदोही जागरण विद्यार्थियों ने कानरा महाविद्यालय में देखी प्रयोगशाला









### केएनपीजी के जंतु विज्ञान विभाग में प्रशिक्षण में शामिल छात्र-छात्राएं। संवाद

### विद्यार्थियों को बताया ब्लास्ट का प्रयोग

ज्ञानपुर। काशी नरेश राजकीय स्नातकोत्तर महाविद्यालय में सोमवार को डीबीटी स्टार कॉलेज स्कीम के तहत सिक्वेंस एनालिसिस बाय यूजिंग ब्लास्ट विषय पर प्रशिक्षण का आयोजन किया गया। बीएससी चतुर्थ सेमेस्टर के छात्र-छात्राओं ने इसमें भाग लिया।

प्रोग्राम कोऑर्डिनेटर डॉ. रश्मि सिंह ने सरस्वती प्रतिमा पर माल्यार्पण कर शभारंभ किया। उन्होंने स्कीम के महत्व को समझाया और इस प्रोग्राम के सफलता के लिए शुभकामनाएं दीं। जंतु विज्ञान विभाग के डाॅ. दीपक वर्मा ने छात्र- छात्राओं को बताया कि ब्लास्ट का प्रयोग करके विभिन्न जीव जातियों में पाए जाने वाले प्रोटीन और न्यूक्लियोटाइड अनुक्रम का अध्ययन कर सकते हैं। इस मौके पर डॉ. रत्नेश कुमार सोनी, विवेक वर्मा, डॉ. आकांक्षा कुशवाहा, अंजनी कुमार सहित अन्य रहे। संवाद

## विद्यार्थियों को बताए गए

ज्ञानपुर, संवाददाता। काशी नरेश राजकीय स्नातकोत्तर महाविद्यालय में शनिवार को नैनोटेक्नोलाजी की उपयोगिता पर पद्मश्री ओएन श्रीवास्तव मेमोरियल व्याख्यान का आयोजन किया गया। इसमें विद्यार्थियों को प्रकृति में विद्यमान नैनो पदार्थ के उपयोग के बारे में जानकारी दी गई। भौतिक विज्ञान में भारत सरकार बायोटेक्नोलाजी विभाग नई दिल्ली के सीजन्य से डीबीटी स्टार कालेज स्कीम के तहत हुए कार्यक्रम में बीएससी चतुर्थ व द्वितीय सेमेस्टर के विद्यार्थी उपस्थित रहे।

रसायन विज्ञान विभाग के डा. मृदुल

 छात्रों को शोध के लिए किया गया पेरित

केएनपीजी कालेज में शनिवार को व्याख्यान

उपयोग के बारे में बताया। प्रकृति में विद्यमान नैनो पदार्थ की उपलब्धता का जिक्र किया। नैनो टेक्नोलाजी के क्षेत्र में हो रहे शोध के बारे में प्रकाश डालते हुए स्टूडेंट्स को इस दिशा में रिसर्च करने को प्रेरित किया। कोऑर्डिनेटर डा. कल्पना अवस्थी ने प्रो. ओएन श्रीवास्तव द्वारा दिए गए कार्य व विज्ञान क्षेत्र में योगदान की जानकारी दी। डा. श्रीप्रकाश मिश्र, डा. अखिलेश कुमार रहे।

### **स्पेक्ट्रोर-कोपी लैब में मिला प्रशिक्षण** छात्राओं को प्रायोगिक विधि से दी पादप कार्य की जानकार्र क्रियावी विश्वान विश्वान

ज्ञानपुर, संवाददाता। काशी नरेश राजकीयस्नातकोत्तर महाविद्यालय के भीतिक विज्ञान द्वारा डीबीटी स्टार कालेज के स्कीम परियोजना के तहत इंस्टीड्यूट्याल्याल विजिट गुरुवार को विद्यार्थियों ने इलाहाबाद युनिवर्सिटी में की। विविक के स्पेक्ट्रोस्कोपी लीव में



की ओर से डीबीटी स्टार कालेज स्कीम के अंतर्गत केशव प्रसाद राजकीय महिला महाविद्यालय औराई के स्नातक विज्ञान वर्ग के विद्यार्थियों लिए कार्यशाला का आयोजन

उद्देश्य से आयोजित कार्यक्रम का शुभारंभ प्राचार्य प्रो. रमेशचंद यादव ने मां सरस्वती की प्रतिमा पर माल्यापंण करके किया। डा. घनश्याम मिश्र ने छात्राओं को अनुसंधान से जुड़ने के

संग्राद सहयोगी, क्षानपुर: काशी नरेश राजकीय महाविद्यालयों के विद्यार्थियों गए उपकरणों की मदद से प्रयो में दैनिक जीवन में इस पदार्थ के राजकीय स्नातकोत्तर महाविद्यालय को डीबीटी स्टार कालेज स्कीम से करके डा. शोगाली सिंह व डा. गोता ज्ञानपुर में वनस्पति विज्ञान विभाग प्राप्त सुविद्या से लाभान्वित करने के यादव ने दिखाया। छात्राओं ने से पौथों में पाये जाने वाले वर्णको को अलग करने की विधि व स्पेक्ट्रोफोटोमीटर की सहायता से क्लोरोफिल की मात्रा का अनुमान लगाया। वनस्पति विज्ञान की प्रयोगशाला में उपलब्ध

### Link of the some programme organized Under DBT Star College Scheme

- 1. https://youtu.be/A4Uyex483vY
- 2. <a href="https://streetbuzz.co.in/newsapp/view/post:392492">https://streetbuzz.co.in/newsapp/view/post:392492</a>
- 3. <a href="https://streetbuzz.co.in/newsapp//view/post:396857">https://streetbuzz.co.in/newsapp//view/post:396857</a>
- 4. https://youtu.be/5YnkbuNLpPo
- 5. <a href="https://youtu.be/9EopYCBqFZ4">https://youtu.be/9EopYCBqFZ4</a>
- 6. <a href="https://youtu.be/w1cPzdyI7RU">https://youtu.be/w1cPzdyI7RU</a>
- 7. <a href="https://youtu.be/M3uDBoUvcEM">https://youtu.be/M3uDBoUvcEM</a>
- 8. https://youtu.be/NGPI6aZuri0
- 9. <a href="https://youtu.be/cE\_yI-pSxLg">https://youtu.be/cE\_yI-pSxLg</a>
- 10. <a href="https://youtu.be/VEJsOI9x\_x8">https://youtu.be/VEJsOI9x\_x8</a>
- 11. https://youtu.be/IAhdDIgIzsc
- 12. https://youtu.be/23vf8qVkQFw
- 13. https://youtu.be/053uyF8c1dU
- 14. https://youtu.be/9GCTyHiT2KQ
- 15. <a href="https://youtu.be/HcaT8fPBLF4">https://youtu.be/HcaT8fPBLF4</a>
- 16. <a href="https://youtu.be/fzYdqfNhop0?si=p0McutMnL\_j3yQWU">https://youtu.be/fzYdqfNhop0?si=p0McutMnL\_j3yQWU</a>
- 17. https://youtu.be/uuboDjkxOFk?si=4u0yKrHrczdO73oq
- 18. https://youtu.be/XHXm400gDI0?si=gtdyK-OPNIndRMBx
- 19. https://youtu.be/F71N1DTvApY
- 20. <a href="https://youtu.be/VrnsTmrn6fM">https://youtu.be/VrnsTmrn6fM</a>
- 21. https://youtu.be/0sBaUT2aazM

Course Coordinator Projevitt Serbinator DBT - Star College Scheme K.N. Govt. P.G. College Gyanpur (Bhadohi)-221304 Head of the Institution AL

Gyanpur (Bhadohi)-221304