

## GOVT. DIGVIJAY AUTONOMOUS PG COLLEGE, RAJNANDGAON, CG

#### **AFFILIATED TO**

Hemchand Yadav Vishwavidyalaya, Durg Reaccredited B++ by NAAC

#### GUEST LECTURE ON ENVIRONMENTAL POLLUTION AND HEALTH

A special invited guest lecture was organized on 7 December 2023, in which Dr. P.R. Chandelkar, Principal, Government Post Graduate College, Balaghat, Madhya Pradesh was specially invited as the chief guest. In his lecture, he told that the main reason for climate change is tampering with the environment and man-made pollution because nature controls natural pollution on its own, but in the present time, man-made pollution, whether it is from vehicles, petroleum, industries or domestic pollution, is adversely affecting the environment. At present, the stubble burnt by farmers is also increasing air pollution to a great extent. In the 21st century, organisms are struggling for their existence, the reason for which is largely human. And human existence is linked to the existence of organisms, if we want to save human existence, then we have to save the environment. The shrinking area of forests is also a matter of concern.





Guest Lecture by Dr. P.R. Chandelkar

# GUEST LECTURE ON THE TOPIC BEST FROM WASTE BY PROF. RENUKA THAKUR

A special invited guest lecture was organized on 08 December 2023, in which Prof. Renuka Thakur, Government Baba Saheb Bhimrao Ambedkar Post Graduate College Dongargaon was specially invited as the chief guest. Before the lecture, the chief guest was welcomed with a bouquet of flowers. In his lecture, he told that at present, all the items available in the markets are packed with paper, wood, plastic or metal. Before use, we remove their packaging or their bun after use and throw it away, which increases garbage due to not being recycled. By reusing such waste, we can control environmental pollution to a great extent. At the college level, our students are making materials used in experimental work from useless items, pots etc. from old car tires and plastic bottles. Useless items are being reused by making doormats etc. from old clothes. By doing this we can inspire society to reuse items and can make many useful things from the waste that we throw away as garbage.



A Sheen



#### **ENVIRONMENTAL AWARENESS PROGRAM**

On 19.07.23, in the Department of Zoology, Mr. Vijay Bhaskar, a cyclist who is running a cycle campaign for environmental protection, told the students in detail about the environmental awareness campaign. He was honored with a certificate by the Head of the Department, Dr. Kiran Lata Damle.



Bicycle for environmental protection

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#### LECTURE ON WORLD NATURE CONSERVATION DAY

On the occasion of World Nature Conservation Day on 28th July 2023, Dr. Kannauje was present as a special guest lecturer at Government Science College, Rajnandgaon. Dr K L Tandekar said that nature conservation is the responsibility of all of us. Rapidly decreasing forests are a matter of concern. Be it the crumbling mountains or the sinking cities, all this is the result of messing with nature. Not only in India but also at the global level, due to excessive rainfall, there is a situation of flood somewhere and drought somewhere. We have to give something back to nature. Efforts to collect and preserve the colors of nature are also very important. Dr Kiran Lata Damle, Head of the Department of Zoology, said that our cultural beliefs that choose nature as the nurturer give the message of stopping greenery and preserving the colors of the earth. Without preserving nature, human life is not safe. Trees, the ornaments of the earth, everyone has the right to live. At present, the paths of many rivers are being blocked, while at some places the mountains are also being cut. Due to deforestation, many animals and plants are becoming extinct. All this has become a problem for trees. In our country, trees are worshipped as God. This is the need of the hour, which we should continue and preserve trees, forests and animals. Take care of them on this occasion. But in the tree plantation program organized under the aegis of the department by the Honorable Dr. Aruna Palta, Vice Chancellor of Durg Hemchand University, a Parijat tree was also planted and she also gave an important message of saving nature to the students.



Lecture by Dr. S.R. Kannoje on World Nature Conservation Day

#### TREE PLANTATION PROGRAM

On 28.07.23, under the guidance of Principal Dr. K.L. Tandekar and leadership of Head of Department Dr. Kiran Lata Damle, all the professors of the department and all the postgraduate level students planted trees in Srujan Samvad campus.



Tree plantation in Srijan Samvad Campus



Tree plantation by Dr. Aruna Palata, Vice Chancellor, Hemchand Yadav University, Durg

# INSPIRED TO CONSERVE BIRDS BY GIVING TRAINING IN ARTIFICIAL NEST MAKING

Like previous years, this year also, under the extension activity program being run by the department, postgraduate pre- and final year students of the Department of Zoology were given training in making artificial nests for birds. The students of Government Higher Secondary School, Thelkadih can make artificial nests for local birds by using waste materials kept in the house like coconut peel, jute rope, straw, old plastic boxes, earthen pots etc. which are not in use. Dr Majid Ali said that the decreasing population of various types of local birds including sparrows is a matter of global concern. Many artificial nests made by us in the past have been chosen by many types of birds including sparrows.

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Prof. Dr. Majid Ali giving a lecture

M.Sc. Final year students giving training

#### **ZOOLOGY STUDENTS OBSERVED MIGRATORY BIRDS**

On 12 November 2023, the postgraduate pre- and final year students of the department reached Ruse Reservoir on the occasion of National Bird Day. Where they observed migratory and local birds and did photography. It is known that Ruse Reservoir is known for the arrival of migratory birds for the past years. Professor of the institute, Mr. Gurpreet Singh Bhatia gave various types of information to the students about the migratory birds coming to Rajnandgaon area.



Students observing migratory birds

# MESSAGE OF BIRD CONSERVATION BY CONSTRUCTING ARTIFICIAL NEST ON SPARROW DAY

International Sparrow Day was organized on 12 March 2023. Inaugurating the program, Head of Department Dr. Kiran Lata Damle said that for the last 04 years, the department has been working to inspire people to conserve birds by providing training in artificial nest construction on Sparrow Day every year and installing these artificial nests in the college and surrounding areas. Birds like sparrows have also made some artificial nests their home, which is a positive response. Thereafter, the Principal said in his address that today the chirping sparrows seen in our courtyard are decreasing, the species of various birds including sparrows which we used to see in our childhood are not easily visible now, the conservation of various birds including sparrows is very important for the conservation of our nature because these birds directly or indirectly scatter the seeds of various trees and plants and also make them capable of germination. Senior Professor of the Department Dr. Sanjay Thiske told that the process of making artificial nest is quite simple and we can contribute to the conservation of birds by doing such work at home level. Assistant Professor Dr. Majid Ali told that some birds make nests and some do not, the process of nest making depends on their breeding season, one of the main reasons for the absence of birds commonly seen around the house is also the lack of things used in their nest making, increasing urbanization has reduced the grass, straw, twigs, stubble and small bushes and trees required for nest making. Assistant Professor Mr. Chiranjeev Pandey told that it is not at all true that just by making artificial nests, birds will use it, whether some birds will adopt abandoned nests or artificial nests made from pots, boxes, old cardboard, stubble, jute etc. or not depends on their selection process which is quite complex. Yet we have seen that sparrows readily choose many of our artificial nests. Special guest of the program and former student of the department, Prakriti Mitan Than Singh Sahu, first of all took the initiative in the process of artificial nest construction in the department and also taught his own experiment to other classmates of the department and made it a public awareness program through expansion speed so that people can be inspired to protect sparrows and other birds. There are many useless things in the house, using which we can build artificial nests for the birds around us.

Although naturally built nests are much better, but looking at the current circumstances, we also need to make such efforts for their conservation. There are many birds that have adapted to living in cities, in this situation we can protect them in urban areas by providing them artificial nests. Along with the construction of artificial nests, the methods of installing them are also very important, the birds select the nests installed at the right place and in the right manner. Besides, by providing them food and water etc., we can also attract them to live in those habitats.



International Sparrow Day

#### **EDUCATIONAL TOURS**

#### STUDENTS LEARNT INDUCED BREEDING OF ROHU-KATLA

On 24.07.23, postgraduate students of the department visited the Government Fish Seed Project, Fish Seed Production and Promotion Center, Kokpur Development Block, Dongargaon, District Rajnandgaon and received training. Where Fisheries Inspector Mr. Sandeep Kumar Sahu gave a detailed lecture to the students on induced fish breeding, seed promotion and production included in their curriculum and told that here large quantities of fish seeds are produced by induced breeding for seed production of Rohu-Katla and Mrigal fish and fish seeds are also distributed from here at government rates. He first gave a lecture on induced breeding production and then took the students to the breeding unit and explained the breeding process going on in the unit practically. Showed the process of brooder tank, spawning, seed hatching, spawning.



Fisheries Inspector Mr. Sandeep Kumar Sahu talking to students



Government Fish Seed Project Fish Seed Production and Promotion Center Kokpur (Dongargaon)



#### VISIT TO TAURANGA RESERVOIR DISTRICT GARIABAND

On 23 August 2023, the students of Industrial Fisheries and Fisheries Graduate visited Tauranga Reservoir District Gariaband where they observed the new technique of fish farming called cage culture and received training. The manager of the reservoir explained in detail about fish farming in the reservoir farm and also explained in detail about the increase in production due to the utility of cage culture. Along with this, he also told the students about the schemes, subsidy and entrepreneurship development schemes being given by the Chhattisgarh State Government to start cage culture.



Students going on Educational Tour





Cage culture unit located at Taurenga District Gariaband

#### STUDENTS SAW JUNGLE SAFARI

For educational tour, the students of Zoology postgraduate visited the zoo and safari in Jungle Safari located in Naya Raipur Atal Nagar. As per the syllabus, the students have to collect information about the animals present in the nearby zoo and make a project on it. In the Jungle Safari, the students saw white tiger, Asiatic lion, Indian leopard, Royal Bengal tiger, bear, hyena, jackal, wolf, wild dog (dhol), fox, gaur, wild buffalo, wild buffalo breeding and conservation center, sambhar, chital, nilgai, chikara, pisuri, black buck, pheasant, black mongoose, otter, porcupine, mongoose, pangolin, butterfly garden, different species of monkeys, bird garden, hippopotamus, gharial, crocodile, monitor lizard, tortoise and snake park.





Visit to Zoo and Safari in Jungle Safari

#### TREE PLANTATION

#### प्रेस विज्ञप्ति

शासकीय दिग्विजय स्वशासी स्नातकोत्तर महाविद्यालय राजनांदगाँव (छ.ग.) के प्राचार्य डॉ. के एल. टांडेकर के निर्देशानुसार विभागीय गतिविधि के अंतर्गत महाविद्यालय परिषर को हरा—भरा रखने के लिए वृक्षारोपण हेतु सृजन संवाद के पास स्थित वाटिका में सभी विभागों को अलग—अलग स्थान आबंटित किया गया। भूगोल विभाग को आंबटित स्थल पर वृक्षारोपण का कार्य विभागाध्यक्ष डॉ. कृष्ण नंदन प्रसाद के नेतृत्व में रबर का पौधा के साथ तुलसी, पारिजात, गुड़हल जैसे औषधीय पौधे लगाये गये। वृक्षारोपण हेतु एम.ए. (भूगोल) स्नातकोत्तर परिषद के प्रथम व तृतीय सेमेस्टर के विद्यार्थियों ने समर्पण भाव से इस लघु, परन्तु अति महत्वपूर्ण कार्य को बहुत ही उत्साह से पूरा किया तथा इन पौधों की नियमित देख—रेख करने का संकल्प लिया। इस अवसर पर विभाग के दोनों अतिथि व्याख्याता डॉ. श्रद्धा साहू एवं श्री हेमराज दाउरा भी उपस्थित रहे।



#### DIGVIJAY VYAKHYAAN MALA( 5-8 DECEMBER 2023)

## 1. Dr. (Smt) Nivedita A. Lal, Govt. Kamla Devi Rathi PG College, Rajnadgoan(C.G.)

Press release

Under the Dwan activity in the Department of Geography of Government Digvijay Autonomous College, Rajnandgaon (CG), today on 05/12/2024, Assistant Professor of Arts Faculty of Government Kamaladevi Rathi Girls Post Graduate College, Dr. Nivedita A. Lal presented a detailed and substantial lecture on the climate awareness program "Stockholm Conference" under the aegis of Digvijay Lecture series. During the lecture, he told that climate change has become a global problem today. This lecture benefited the students of M.A. First and Third Semester (Geography). The students not only seriously noted the important aspects but also actively raised questions at the end of the lecture to satisfy their curiosity. Dr. Krishna Nandan Prasad, Dr. Shraddhadevi Sahu, Shri Hemraj Daura, Shri Mohit Tandon were present on the occasion of the lecture.

#### 2. Dr. Kuber singh Gurupanch, Bharti University Durg (C.G.)

#### Press release

Under the MoU activity in the Department of Geography of Government Digvijay Autonomous College, Rajnandgaon (CG), today on 07/12/2024, Dr. Kuber Singh Gurupanch, Dean, Faculty of Arts, Bharti University, presented a comprehensive lecture on an important topic of research methodology - types of research reports under the aegis of Digvijay Lecture Series. This lecture benefited the students of M.A. 1st and 3rd Semester (Geography). The students not only seriously noted the important aspects but also actively raised questions at the end of the lecture to satisfy their curiosity. Dr. Shraddhadevi Sahu, Shri Hemraj Daura, Shri Mohit Tandon were present on the occasion of the lecture.

#### 3. Dr. K. K. Dwivedi, Govt. Kamla Devi Rathi PG College ,Rajnadgoan(C.G.)

#### Press release

In the Geography Department of Government Digvijay Autonomous College, Rajnandgaon (CG), under the Mou activity, today on 05/12/2024, Assistant Professor of Arts Faculty of Government Kamaladevi Rathi Girls Post Graduate College, Dr. K.K. Dwivedi presented a detailed and substantial lecture on the climate awareness program 'Apkamdabeme Va Bispujam Bhindham Kntpadah Jim Lmvasvahapans Ndak Bpejavatapans Jpume' under the aegis of Digvijay Lecture Series. During the lecture, he told that climate change has become a global problem today. This lecture benefited the students of M.A. First and Third Semester (Geography). The students not only seriously noted the important aspects but also actively raised questions at the end of the lecture to satisfy their curiosity. Dr. Krishna Nandan Prasad, Dr. Shraddhadevi Sahu, Mr. Hemraj Daura, Mr. Mohit Tandon were present on the occasion of the lecture.







#### NATIONAL SEMINAR ( GEOGRAPHY )

### रिथति से परिरिथतिः भागोलिक विज्ञान में बदलता अनवेशन विषय पर दिग्विजय महाविद्यालय पर संगोध्दी

दिविजय स्वशासी स्नातकोत्तर महाविद्यालय, राजनांदगाव के भूगोल विभाग द्वारा दो दिवसीय राष्ट्रीय शोध संगोष्ठी का आयोजन 01 व 02 मार्च 2024 को किया गया. इस संगोष्ठी का विषय स्थिति से परिस्थिति भागोलिक विज्ञान मे बदलता अनवेशनष् था.

कार्यक्रम के प्रथम दिवस अतिथियों के द्वारा संगोष्ठी के पत्रिका का विमोचन किया गया कार्यक्रम के आरंभ में संस्था प्रमुख प्राचार्य की बीमारी, के बारे में उन्होंने अपनी महोदय डॉ के एल टांडेकर ने संगोष्ठी की उपयोगिता एवं वर्तमान परिप्रेक्ष्य में इसकी महत्ता पर बहुत जी संक्षिप्त एवं सारगर्भित सम्बोधन दिया. इस प्रोग्राम के कनवेनर डॉ. एस. जेनामनी सहायक प्राध्यापक,भूगोल ने कार्यक्रम के रुपरेखा का संक्षिप्त



परिचय दिया. एवं अन्य जानकारी प्रोफेसर के.एल. प्रसाद ने दी। डॉ. वरुण कुमार, मुख्य अतिथि दिल्ली विश्वविद्यालय, नई दिल्ली, उद्घाटन समारोह के कीनोट स्पीकर थे. मन बात बहुत ही सारगर्भित तरीके से श्रोताओं के सामने रखी.

उन्होंने मन की महत्ता पर विशेष जोर देते हुए कहा की अगर अवचेतन मन में जो विचार आते है, उसमें से अच्छे विचारों को आत्मसात करते हुए कैसे हम खुद

को कैसे और बेहतर बना सकते है मनःस्थिति को बेहतर तरीके से समझाने के लिए डॉ वरुण कुमार ने कई उद्धर्णों का उदाहरण दिया जिसमें मानसिक प्रदुषण का प्रमुख कारण एक समय पर कई कार्यों को करने की असफल कोशिश करना है. मोबाइल का उपयोग करते समय ज्यादातर लोग कई दैनिक क्रियाकलापों को सम्पादित करते है जिसमे पढ़ाई, खाना, सोना आदि प्रमुख है. इसके फ्लस्वरूप कोई भी कार्य पूर्णतः सम्पादित नहीं हो पाती, चिडचिडापन चिंता सामान्य बात है.मुख्य अतिथि प्रोफेसर शांतन पटनायक राजीव गाँधी यनिवर्सिटी. अरुणाचाल प्रदेश ने 'हम्पैक्ट ऑफ क्लाडमेट चेंज ऑन वाटर रिसोर्ससष् पर अपनी बात श्रोताओं के सामने रखी. विकाश से विनाश की ओर, सस्टेनेबलडेवलपमेंट जैसे प्रमुख मुद्दों पर उन्होंने काफी विस्तार से चर्चा किया. मनोस्थिति का आधार जिस स्थिति के साथ वो वो वैसा ही व्यवहार करने लगता है.विचारों से विचारों का प्रबंधन उद्घाटन समारोह मे विज्ञान, कला एवं कॉमर्स के विभागध्यक्ष, सहायक प्राध्यापक, शोधार्थी एवं छत्र छात्रायें उपस्थित थे.मंच संचालन डॉ अनीता साहा ने सफ्लता पूर्वक किया।

410T 9/3/24

## कॉलेज में भौगोलिक विज्ञान में बदलता अनवेशन विषय पर संगोष्टी आयोजित

हरिभूमि न्यूज 🕪 राजनांदगांव

शासकीय दिग्विजय स्वशासी महाविद्यालय राजनांदगांव के भूगोल विभाग द्वारा दो दिवसीय राष्ट्रीय शोध संगोष्ठी का आयोजन 1 व 2 मार्च को किया गया। इस संगोष्ठी का विषय स्थिति से परिस्थिति भौगोलिक विज्ञान में बदलता अनवेशन था। कार्यक्रम के प्रथम दिवस अतिथियों द्वारा संगोष्ठी के पंत्रिका का विमोचन किया गया। कार्यक्रम के आरंभ में प्राचार्य डॉ. केएल टांडेकर ने संगोष्ठी की उपयोगिता एवं वर्तमान परिप्रेक्ष्य में इसकी महता पर सारगर्भित संबोधन दिया। इस प्रोग्राम के कनवेनर डॉ. एस जेनामनी ने कार्यक्रम की रूपरेखा का संक्षिप्त परिचय दिया एवं अन्य जानकारी प्रो. केएल प्रसाद ने दी। मुख्य अतिथि डॉ. वरूण कुमार ने मन की महत्ता पर विशेष जोर देते कहा कि अगर अवचेतन मन में जो विचार आते हैं, उसमें से अच्छे विचारों को आत्मसात करते

#### समस्याओं को रखा

संगोष्ठी के दूसरे दिन प्रथम रोशन में टेक्निकल रोशन का कार्यक्रम था। जिसमें विभिन्न क्षेत्रों के शोधार्थियों ने अपने पेपर प्रस्तुत किए। शोधार्थियों ने अपने आसपास के भौनोतिक क्षेत्रों की समस्याओं, वर्तमान परिपेक्ष्य, विभिन्न जान जानवार क नाणातक क्रम का चलस्वाजा, प्रामाण चारप्रव्य, (cidio) प्रवूषणी, जलवायु परिवर्तन एवं उजसे होने वाली समस्याओं को सबके समक्ष अबूबर्गा, जलवायु पारपतान रूप जनत राम पारा दानस्थाना प्रा स्वर्ण समझ रखा एवं स्नातकोत्तर के छात्र-छात्राओं को शोध के लिए प्रेसित किया। समापन समारोह अवसर पर प्रो. वरुण कुमार ने बताया कि हमारे सोच का गहरा प्रभाव भी आसपास के पर्यावरण पर पड़ता है। दुर्ग विश्वविद्यालय के प्रभाव मा जालपाल प्रभाव के शोध कार्यों को जिंदगी में आत्मसात करने पर कुलसंविव मूर्पेंद्र कुलदीप ने शोध कार्यों को जिंदगी में आत्मसात करने पर जोर दिया। प्राचार्य डॉ. केरल टांडेकर ने कहा कि आप जैसा सोचेंगे वैसा बन जाएंगे अर्थात जैसा कर्म होगा, वैसा फल मिलेगा। समापन समारोह में विज्ञान, कला एवं कॉमर्स के विमागध्यक्ष, सहायक प्राध्यापक, शोधार्थी एवं छात्र-छात्राएं उपस्थित थे।

हम खुद को कैसे और बेहतर बना सकते है। डॉ. वरुण कुमार ने कई उद्धर्णों का उदाहरण दिया।

मुख्य अतिथि प्रो. शांतनु पटनायक ने इम्पैक्ट ऑफ क्लाइमेट चेंज ऑन वाटर रिसोर्सस पर अपनी बात श्रोताओं के सामने रखी। उन्होंने जलवायु परिवर्तन के सात सिद्धांत पर विस्तार से चर्चा की। डॉ. कुबेर सिंह गुरूपंच ने बताया कि कैसे पस्थितियां किसी इंसान की मनोस्थिति को परवर्तित करने में एक कारक का कार्य करता है। विचारों से विचारों का प्रबंधन उद्घाटन समारोह में विज्ञान, कला एवं कॉमर्स के विभागध्यक्ष सहायक प्राध्यापक, शोधार्थी ए छात्र-छात्राएं उपस्थित थे। मंच संचालन डॉ. अनीता साहा ने किया। ग्रीन हाइड्रोजन के बारे में दिग्विजय कॉलेज के अतिथि व्याख्याता सृष्टि शर्मा ने अपना प्रेजेंटेशन दिया।







#### PLANTATION AND CLEANLINESS DRIVE

A cleanliness and plantation drive was organised by the students of the department with the aim to create an Oxy-zone by planting the saplings of tulsi in the premises of the department.

#### **Plantation:**

The department of Mathematics has done on 18.07.2023 in the garden of Srijan Samvad.













Principal
Govt. Digvijay Auto. PG College,
Rajnandgaon

#### FOUR YEAR UNDERGRADUATE PROGRAM (2024 – 28) COURSE CURRICULUM

		COURSE	TRODUCTIO	)N	
		PART A: IN	TRODUCTIO	Sansia 200 to	
Drogs	am: Certificate Course	Semester- I	Sem	Session: 2024-25	i
1 Togs	Course Code	rse Code AEC 01			
1 2	Course Title	Environmental Studies Ability Enhancement Course (AEC)			
3	Course Type	As per requirem	ent	(HBC)	
1	Prerequisite (If Any)	As per requirem	course, studen	ts will be able to -	
5	Course Outcome (CO)  CO 01: relate the basic concept of the environment				
				alterations	
		CO 03. develop	skills in enviro	nmental measurement	
		CO 04: examine	correction me	asures of the environment	
6	Credit Value	02 C	01 Credit =	15 Hrs. Teaching-Learning	3
7	Total Marks		larks: 50	Minimum Pass n	narks: 20
		PART: B CONTE	NT OF THE C	COURSE	
Total	No. of Teaching-Learnin	g Periods: 30Hou	rs/ 30Periods		No. of
UNI	r	TOPIC (Cou	rse Contents)		Hours
OTTE					Tiours
	Basic Composition:	at of the	environment		
	1. Abiotic and Biotic	1 Disting components of the environment			
I	2. Biodiversity—Concept, types, and measures about its protection				07
	3. Basic concept of Bio-Geo Chemical Cycle				
	4. Energy Flow in an	ecosystem			
	Alterations in Enviro	nment:			
	1. Concept and compo	1. Concept and components of the pond ecosystem			
II	2 Air pollution and me	2. Air pollution and measures for its control			
•	2 Water pollution and	2. Wester pollution and measures for its control			
	4. Global warming, Climate change, and possible measures				·
	Measurements of Env	vironmental Comp	onents		
	1 Soil composition an	d methods of its an	alysis		08
Ш	a vy	La W. Complexis methods for DO BOD, COD			
•••	2 Water analysis meth	<ol> <li>Water analysis methods for pH, TDS, Turbidity, Salinity, and Alkalinity</li> <li>Information about environmental factors—PM-10, PM-2.5, NO2, O3</li> </ol>			
	4. Information about e	nvironmental factor	rs—PM-10, PN	M-2.5, NO2, O3	-
		Application Measures			
	Useful microbes to control water pollution				08
IV	2. Useful microbes to control soil pollution			00	
1 4	3. Concept of Biodegradation				
	4. Concept of Phytoremediation				
Key	Ecosystem, Pollution	, Climate Change,	Biodegradati	on	An
Wor	Name an	nd Signature of Co	nvener and N	lembers of CBOS	(())
	ranic an	in Digilitare of Co			Mr.

Monday Manday Amite Panda Mindle Monday Dr. Shironi Shi Manday Dr. Shironi Shi Manday Dr. Shironi Shi Dr. Amite Panda Dr. Amit

**Learning Resources** PART-C: Text Books, Reference Books, and Others Text Books Recommended -Ecology and Environment, 8th Edition, P.D.Sharma, Rastogi Publication, Meerut, Environmental Biology, 2nd Edition, P.D.Sharma, Rastogi Publication, Meerut, 2. Environmental Biology and Toxicology, 2<sup>nd</sup> Edition, P.D.Sharma, Rastogi Publication, Meerut.

3. Environmental Biology and Toxicology, 2<sup>nd</sup> Edition, P.D.Sharma, Rastogi Publication, Meerut. 4. Environmental Studies, 1st Edition, S.V.S.Rana, Rastogi Publication, Meerut. 5. Environmental Biotechnology, 1st Edition, S. V. S. Rana, Rastogi Publication, Meerut. Online Resources- e-Resources / e-books and e-learning portals Online Resourcese-Resources / e-books and e-learning portals PART -D: Assessment and Evaluation Suggested Continuous Evaluation Methods: 50 Marks Maximum Marks: 15 Marks Continuous Internal Assessment (CIA): End Semester Exam (ESE): 35 Marks Better marks out of the two Test / Quiz Continuous InternalInternal Test / Quiz-(2): 10 & 10 Assignment/Seminar +Attendance - 05 Assessment (CIA): + obtained marks in Assignment shall be Total Marks -15 (By Course Teacher) considered against 15 Marks Two sections - A & B **End Semester** Section A: Q1. Objective -05 x1 = 05 Mark; Q2. Short answer type- 5x2 = 10 MarksExam (ESE): Section B: Descriptive answer type qts., 1 out of 2 from each unit- 4x05 = 20 Marks Name and Signature of Convener & Members of CBoS: Thirathane Dr. offwalasyn Samana 1106/24 Stix

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Mar (Dr. Stironi Sharma) (Da. SanjanaBheiget) Amite Ponda Or. Amite Ponda)

## Govt. Digvijay Autonomous PG College Rajnandgaon, Chhattisgarh

## Department of Chemistry

## **Ability Enhancement Compulsory Course (AECC)**

Environmental Studies at Undergraduate Level

Learning Outcome-based Curriculum Framework (Effective from Academic Year 2024-25)

(For Semester I/II or III/IV)

B.Sc.,

B.A.,

B.Com.,

B.C.A.

AlsThana Jandang Jandang

Session: 2024-25	Program: B.Sc./B.A./B.Com./BCA
Semester: I or III	Course Type: AECC
Course Title: Environmental Studies	Course Code:
Credit: 2	Lecture: 30
M.M.: 50 (40 + 10)	Minimum Passing Marks: 40%

Title	Environmental Studies
	The course will empower the undergraduate students by helping them to:
Objectives	i. Gain in-depth knowledge on natural processes and resources that sustain life and
Course	<ul> <li>The course will empower the undergraduate students by helping them to: <ol> <li>Gain in-depth knowledge on natural processes and resources that sustain life and govern economy.</li> <li>Understand the consequences of human actions on the web of life, global economy, and quality of human life.</li> <li>Develop critical thinking for shaping strategies (scientific, social, economic, administrative, and legal) for environmental protection, conservation of biodiversity, environmental equity, and sustainable development.</li> <li>Acquire values and attitudes towards understanding complex environmentaleconomic- social challenges, and active participation in solving current environmental problems and preventing the future ones.</li> <li>Adopt sustainability as a practice in life, society, and industry.</li> </ol> </li> <li>The course will empower the undergraduate students through: <ol> <li>Gaining of in-depth knowledge on natural processes and resources that sustain life and govern economy.</li> <li>Understanding and predicting the consequences of human actions on the web of life, global economy, and quality of human life.</li> <li>Development of critical thinking for shaping strategies (scientific, social, economic, administrative, and legal) for environmental protection, conservation of biodiversity, environmental equity, and sustainable</li> </ol> </li></ul>
	<ul> <li>iv. Acquisition of values and attitudes towards understanding complex environmental- economic-social challenges, and active participation in solving current environmental problems and preventing the future ones.</li> <li>v. Encouraging adoption of sustainability as a practice in life, society, and</li> </ul>
	industry.

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Environmental Studies

Units	Lectures	Topics	
T	8	Introduction to Environmental Studies Multidisciplinary nature of environmental studies; components of environment: atmosphere, hydrosphere, lithosphere, and biosphere (पर्यावरण अध्ययन की बहुविषयक प्रकृति; पर्यावरण के घटक: वायुमंडल, जलमंडल, स्थलमंडल और जीवमंडल)  Ecosystems Definition and concept of Ecosystem (पारिस्थितिकी तंत्र की परिभाषा और अवधारणा)	
11	7	Natural Resources  Land resources: Minerals, soil, Land cover, land use change, land degradation, soil erosion, and desertification;  (भूमि संसाधन: खनिज, मिट्टी, भूमि आवरण, भूमि उपयोग परिवर्तन, भूमि क्षरण, मृदा अपरदन और मरुस्थलीकरण)  Water resources: Natural and man-made sources; Uses of water; Over exploitation of surface and ground water resources; Floods and drought  (जल संसाधन: प्राकृतिक और मानव निर्मित स्रोत; पानी का उपयोग; सतही और भूजल संसाधनों का अत्यधिक दोहन; वाढ़, सूखा।)	
111	8	Environmental Pollution  Environmental pollution (Air, water, soil, thermal, and noise): causes, effects, and controls; Primary and secondary air pollutants; Air and water quality standards.  (पर्यावरण प्रदूषण (वायु, पानी, मिट्टी, थर्मल और शोर): कारण, प्रभाव और नियंत्रण; प्राथमिक और माध्यमिक वायु प्रदूषक; वायु और जल गुणवत्ता मानक)	
IV	7	Causes of Climate change, Global warming, Ozone layer depletion, and Acid rain; Impacts on human communities. (जलवायु परिवर्तन के कारण, ग्लोबल वार्मिंग, ओजोन परत का हास और अम्लीय वर्षा; मानव समुदायों पर प्रभाव।	

#### Suggested Readings

- Raven, P.H, Hassenzahl, D.M., Hager, M.C, Gift, N.Y., and Berg, L.R. (2015). Environment, 8th Edition. Wiley Publishing, USA. Chapter 1 (Pages: 1-17); Chapter 2 (Pages: 22-23); Chapter 3 (Pages: 40, 41); Chapter 4 (Pages: 64, 66).
- Singh, J.S., Singh, S.P., and Gupta, S.R. (2017). Ecology. Environmental Science and Conservation. S. Chand Publishing, New Delhi. Chapter 1 (Page: 3-28).

**Environmental Studies** 

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- Odum, E.P., Odum, H.T., and Andrews, J. (1971). Fundamentals of Ecology. Saunders, Philadelphia, USA. Chapter 1 (Pages: 1-16); Chapter 2 (Pages: 18-76); Chapter 10 (Pages: 414-458).
- 4. Raven, P.H, Hassenzahl, D.M., Hager, M.C, Gift, N.Y., and Berg, L.R. (2015). Environment, 9th Edition. Wiley Publishing, USA. Chapter 3 (Pages: 38-52); Chapter 4 (Pages: 53-62); Chapter 5 (Pages: 100-103); Chapter 6 (Pages: 106-128).
- 5. Singh, J.S., Singh, S.P., and Gupta, S.R. (2017). Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi. Chapter 13 (Pages: 307-323); Chapter 18 (Pages: 420-442); Chapter 28 (Pages: 747-769).
- 6. Gadgil, M. and Guha, R. (1993). This Fissured Land: An Ecological History of India. University of California Press, Berkeley, USA. (pp. 1-245).
- McCully, P. (1996). Rivers no more: the environmental effects of dams, In: Silenced Rivers: The Ecology and Politics of Large Dams, Zed Books, New York, USA. Page. 29-64.
- 8. Raven, P.H, Hassenzahl, D.M., Hager, M.C, Gift, N.Y. and Berg, L.R. (2015). Environment, 9th Edition. Wiley Publishing, USA. Chapters 10, 11, 12, 13 (Pages: 180-263); Chapter 14 (Pages: 272-275); Chapter 15 (Pages: 286-289).
- 9. Singh, J.S., Singh, S.P. and Gupta, S.R. (2017). Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi. Chapter 25 (Pages: 623-663).
- 10. Primack, R.B. (2014). Essentials of Conservation Biology, Oxford University Press, USA. Page. 1-536.
- 11. Raven, P.H. Hassenzahl, D.M., Hager, M.C. Gift, N.Y. and Berg, L.R. (2015). *Environment*, 9th Edition. Wiley Publishing, USA. Chapter 5 (Pages: 97-99); Chapter 16 (Pages: 299-318).
- 12. Singh, J.S., Singh, S.P. and Gupta, S.R. (2017). *Ecology, Environmental Science and Conservation*. S. Chand Publishing, New Delhi. Chapters 24 (Pages: 599-690); Chapter 26 (Pages: 664-714).
- 13. Raven, P.H., Hassenzahl, D.M., Hager, M.C., Gift, N.Y. and Berg, L.R. (2015). Environment, 9th Edition. Wiley Publishing. USA. Chapter 19 (Pages: 359-381); Chapter 21 (Pages: 401-421); Chapter 23 (Pages: 440-453).
- 14. Singh, J.S., Singh, S.P. and Gupta, S.R. (2017). Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi. Chapters 19, 20, 12 (Pages: 445-535).
- 15. Divan, S. and Rosencranz, A. (2002). *Environmental Law and Policy in India: Cases, Material & Statutes*, 2nd Edition. Oxford University Press, India. Chapter 2 (Pages: 23-39); Chapter 3 (Pages: 41-86).
- Raven, P.H., Hassenzahl, D.M., Hager, M.C., Gift, N.Y. and Berg, L.R. (2015). *Environment*, 9th Edition. Wiley Publishing, USA. Chapter 19 (Pages: 370-376); Chapter 20 (Pages: 385-399).

- 17 Singh, J.S., Singh, S.P. and Gopta, S.R. (2017). Realize: Environmental Science and Conservation. S. Chand Publishing, New Osthi, Chapter 23 (Pages: 555-598); Chapter 39 (Pages: 801-807).
- Divan, S. and Roseneranz, A. (2002). Environmental Law and Policy in India: Cases: Material & Statutes, 2nd Edition. Oxford University Press, India: Chapter 16 (Pages: 416-473).
- Raven, P.H., Hassenzahl, D.M., Hager, M.C., Gift, N.Y. and Berg, L.R. (2015). Environment, 9th Edition. Wiley Publishing, USA. Chapter 2 (Pages: 33-36); Chapter 8 (Pages: L48-162).
- 20 Singh, J.S., Singh, S.P. and Gupta, S.R. (2017). Ecology. Environmental Science and Conservation. S. Chand Publishing, New Dethi. Chapter 1 (Pages: 23-26); Chapter 31 (Pages: 224-842).

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Chairperson H.O.D 23/57		and the second s	
Subject Expert A Deliance (University Nominee)	ا عيد	8	
Subject Expert. Rate	2	9	, -
	3	10	
Representative	4	11	
(Industry)	5	12	•
(Alumni)	7. Jandang	13	
Representative	7. Vandang	14	
(Professor Science Faculty Other Dept.)			

Session: 2024-25	Program: B.Sc./B.A./B.Com./BCA	
Semester: II or IV	Course Type: AECC	
Course Title: Environmental Studies	Course Code:	
(Project Based)		
Credit: 2	Lecture: 30	
M.M.: 50 (40 + 10)	Minimum Passing Marks: 40%	

#### Marking Scheme:

Project 30 Marks
Internal 10 Marks
Viva 10 Marks
Total 50 Marks

NOTE: Questions will be asked from all the units in the internal evaluation exam.

टीप: आंतरिक मुल्यांकन में सभी इकाइयों से प्रश्न पूछे जायेंगे

npower the undergraduate students by helping
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knowledge on natural processes and resources
and govern economy.
consequences of human actions on the web of
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economic- social challenges, and active
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future ones.
ability as a practice in life, society, and industry.
power the undergraduate students through:

Environmental Studies 25/5724

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Outcomes	i. Gaining of in-depth knowledge on natural processes and resources
	that sustain life and govern economy.
	ii. Understanding and predicting the consequences of human actions on
	the web of life, global economy, and quality of human life.
	iii.Development of critical thinking for shaping strategies (scientific, social, economic, administrative, and legal) for environmental protection, conservation of biodiversity, environmental equity, and sustainable development.  iv.Acquisition of values and attitudes towards understanding complex environmental- economic-social challenges, and active participation in solving current environmental problems and preventing the future ones.  v. Encouraging adoption of sustainability as a practice in life, society, and industry.

Units	Lectures	Topics
	8	Solid Waste Management Introduction, waste classification, methods of waste collection. storage, and transportation, treatment and disposal techniques for solid waste: landfill operation and maintenance, composting. advantages and limitations, vermin-composting, autoclaving incineration, biogas plant, techniques for hazardous waste treatment and safe disposal, nuclear and e-waste management. Government agencies and programs: NCEPC, MOEFCC, CPCB and SPCB's.  (ठोस अपशिष्ट प्रबंधन : परिचय, अपशिष्ट वर्गीकरण, अपशिष्ट संग्रहण, अंडारण और परिवहन के तरीके, ठोस अपशिष्ट के लिए उपचार और निपटान तकनीक: लैंडफिल संचालन और रखरखाव, खाद बनाना: फायदे और सीमाएं, वर्मिन-कंपोस्टिंग, ऑटोक्लेविंग, अस्मीकरण, बायोगैस संयंत्र, खतरनाक अपशिष्ट उपचार के लिए तकनीक और सुरक्षित निपटान, परमाणु और ई-अपशिष्ट प्रबंधन, सरकारी एजेंसियां और कार्यक्रम: एनसीईपीसी, एमओईएफसीसी, सीपीसीबी और एसपीसीबी।)
II	7	Effluent treatment Introduction, wastewater treatment, sludge treatment, aerobic and anaerobic treatment processes, waste reuse and recycling, adsorption, filtration, sedimentation, bag filters, electrostatic precipitation, were scrubbers, absorbers, mist eliminators. (धाराप्रवाह उपचार : परिचय, अपशिष्ट जल उपचार, कीचड़ उपचार, एरोबिक और एनारोबिक उपचार प्रक्रियाएं, अपशिष्ट का पुनः उपयोग और पुनर्चक्रण, सोखना, निरुपंदन, अवसादन, बैग फिल्टर, इलेक्ट्रोस्टैटिक वर्षा, गीला स्क्रबर,

		अवशोषक, धुंध एलिमिनेटर।)
III	8	Industrial safety and management techniques: Industrial safety standards and regulations, material safety datasheet, personal protective equipment (PPE), hierarchy of hazard control, respirators, skin protection, eye protection, hearing protection.
		protective clothing and ensembles, Fire fighting hazards, terminology, classification of fire and extinguishers, factors which contribute to fire, common causes of industrial fire accidents (औद्योगिक सुरक्षा और प्रबंधन तकनीकें : औद्योगिक सुरक्षा मानक और
		विनियम, सामग्री सुरक्षा डेटाशीट, व्यक्तिगत सुरक्षा उपकरण (पीपीई), खतरा
		नियंत्रण का पदानुक्रम, श्वसन यंत्र, त्वचा की सुरक्षा, आंखों की सुरक्षा, श्रवण
		सुरक्षा, सुरक्षात्मक कपड़े और पहनावा, अग्निशमन खतरे, शब्दावली, आग और
		बुझाने वाले यंत्रों का वर्गीकरण, आग लगने में योगदान देने वाले कारक.
		औद्योगिक अग्नि दुर्घटनाओं के सामान्य कारण)
IV	7	Human Population and the EnvironmentPopulation growth, variation among nations Population explosion – Family Welfare Programmes, Environment
		and human health Human Rights, Value education, HIV/ AIDS, Women and child welfare
	~ .	Role of information technology in environment and human health Case studies
		(मानव जनसंख्या और पर्यावरण जनसंख्या वृद्धि. राष्ट्रों के बीच भिन्नता जनसंख्या विस्फोट - परिवार कल्याण कार्यक्रम, पर्यावरण और मानव स्वास्थ्य
2.		मानवाधिकार, मूल्य शिक्षा, एचआईवी/एइस, महिला एवं बाल कल्याण पर्यावरण और मानव स्वास्थ्य में सूचना प्रौद्योगिकी की भूमिका, केस अध्ययन)

#### **Suggested Readings**

- 1. Raven, P.H., Hassenzahl, D.M., Hager, M.C., Gift, N.Y., and Berg, L.R. (2015). *Environment*, 8th Edition. Wiley Publishing, USA. Chapter 1 (Pages: 1-17); Chapter 2 (Pages: 22-23); Chapter 3 (Pages: 40, 41); Chapter 4 (Pages: 64, 66).
- 2. Singh, J.S., Singh, S.P., and Gupta, S.R. (2017). *Ecology, Environmental Science and Conservation*. S. Chand Publishing, New Delhi. **Chapter 1** (Page: **3-28**).
- 3. Odum, E.P., Odum, H.T., and Andrews, J. (1971). Fundamentals of Ecology. Saunders, Philadelphia, USA. Chapter 1 (Pages: 1-16); Chapter 2 (Pages: 18-76); Chapter 10 (Pages: 414-458).
- 4. Raven, P.H., Hassenzahl, D.M., Hager, M.C., Gift, N.Y., and Berg, L.R. (2015). *Environment*, 9th Edition. Wiley Publishing, USA. Chapter 3 (Pages: 38-52); Chapter 4 (Pages: 53-62); Chapter 5 (Pages: 100-103); Chapter 6 (Pages: 106-128).

**Environmental Studies** 

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- 5. Singh, J.S., Singh, S.P., and Gupta, S.R. (2017). *Ecology, Environmental Science and Conservation*. S. Chand Publishing, New Delhi. Chapter 13 (Pages: 307-323); Chapter 18 (Pages: 420-442); Chapter 28 (Pages: 747-769).
- 6. Gadgil, M. and Guha, R. (1993). *This Fissured Land: An Ecological History of India*. University of California Press, Berkeley, USA. (pp. 1-245).
- 7. McCully, P. (1996). *Rivers no more: the environmental effects of dams*, In: *Silenced Rivers: The Ecology and Politics of Large Dams*, Zed Books, New York, USA. **Page. 29-64**.
- 8. Raven, P.H, Hassenzahl, D.M., Hager, M.C, Gift, N.Y. and Berg, L.R. (2015). Environment, 9th Edition. Wiley Publishing, USA. Chapters 10, 11, 12, 13 (Pages: 180-263); Chapter 14 (Pages: 272-275); Chapter 15 (Pages: 286-289).
- 9. Singh, J.S., Singh, S.P. and Gupta, S.R. (2017). *Ecology, Environmental Science and Conservation*. S. Chand Publishing, New Delhi. **Chapter 25** (Pages: **623-663**).
- 10. Primack, R.B. (2014). *Essentials of Conservation Biology*, Oxford University Press, USA. Page. 1-536.
- 11. Raven, P.H, Hassenzahl, D.M., Hager, M.C, Gift, N.Y. and Berg, L.R. (2015). *Environment*, 9th Edition. Wiley Publishing, USA. Chapter 5 (Pages: 97-99); Chapter 16 (Pages: 299-318).
- 12. Singh, J.S., Singh, S.P. and Gupta, S.R. (2017). *Ecology, Environmental Science and Conservation*. S. Chand Publishing, New Delhi. Chapters 24 (Pages: 599-690); Chapter 26 (Pages: 664-714).
- 13. Raven, P.H, Hassenzahl, D.M., Hager, M.C, Gift, N.Y. and Berg, L.R. (2015). Environment, 9th Edition. Wiley Publishing, USA. Chapter 19 (Pages: 359-381); Chapter 21 (Pages: 401-421); Chapter 23 (Pages: 440-453).
- 14. Singh, J.S., Singh, S.P. and Gupta, S.R. (2017). Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi. Chapters 19, 20, 12 (Pages: 445-535).
- Divan, S. and Rosencranz, A. (2002). *Environmental Law and Policy in India: Cases, Material & Statutes*, 2nd Edition. Oxford University Press, India. **Chapter 2** (Pages: **23-39**); **Chapter 3** (Pages: **41-86**).
- 16. Raven, P.H, Hassenzahl, D.M., Hager, M.C, Gift, N.Y. and Berg, L.R. (2015). *Environment*, 9th Edition. Wiley Publishing, USA. Chapter 19 (Pages: 370-376); Chapter 20 (Pages: 385-399).
- 17. Singh, J.S., Singh, S.P. and Gupta, S.R. (2017). *Ecology, Environmental Science and Conservation*. S. Chand Publishing, New Delhi. Chapter 23 (Pages: 555-598); Chapter 30 (Pages: 801-807).

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- Divan, S. and Rosencranz, A. (2002). Environmental Law and Policy in India: Cases, 18. Material & Statutes, 2nd Edition. Oxford University Press, India. Chapter 10 (Pages: 416-473).
- Raven, P.H., Hassenzahl, D.M., Hager, M.C., Gift, N.Y. and Berg, L.R. (2015). 19. Environment, 9th Edition. Wiley Publishing, USA. Chapter 2 (Pages: 33-36); Chapter 8 (Pages: 148-162).
- Singh, J.S., Singh, S.P. and Gupta, S.R. (2017). Ecology, Environmental Science and 20. Conservation. S. Chand Publishing, New Delhi. Chapter 1 (Pages: 23-26); Chapter 31 (Pages: 826-842).

### **AECC Enviornmental Science Project Work**

Rules for the project file and project work report of Enviornmental Science पर्यावरण अध्ययन में प्रोजेक्ट वर्क रिपोर्ट प्रमाण पत्र तथा प्रोजेक्ट फाइल हेतु नियमः

1. Students will do at least 10 hours of field work, whose experience certificate will be

verified from the following officer/public representative.

Parshad /Sarpanch/Village Secretary/MLA/MP/District Panchayat President/ Village

Panchayat President/ विद्यार्थी कम से कम 10 घंटे का फील्ड करेंगे, जिसका अनुभव प्रमाण पत्र निम्न अधिकारी / जनप्रतिनिध से सत्यापित

पार्षद/ सरपंच/ग्राम सचिव/ विधायक/सांसद/ जिला पंचायत अध्यक्ष/ ग्राम पंचायत अध्यक्ष/

2. Students can also get the experience certificate of the field work done from the following Gazetted Officers verified -

Assistant Professor/Professor/Principal//District Panchayat CEO/Municipal Corporation Officer/Other Gazetted Officer

विद्यार्थी किये गए फिल्ड वर्क को निम्न राजपत्रित अधिकारीयों से भी अनुभव प्रमाण पत्र को सत्यापित करवा सकते हैं-सहायक प्राध्यापक/प्राध्यापक / प्राचार्य/ / जिला पंचायत CEO/ नगर निगम अधिकारी/अन्य राजपत्रित अधिकारी

3. It will be mandatory to submit the project work report certificate along with the field project work file.

प्रोजेक्ट वर्क रिपोर्ट प्रमाण पत्र को फील्ड प्रोजेक्ट वर्क फाइल के साथ जमा करना अनिवार्य होगा.

4. While doing field work, you must include color photographs with geographical tags and

फील्ड वर्क करते हुए कलर फोटोग्राफ्स जिओग्राफिकल टैग और टाइम के साथ जरुर सम्मिलित करेंगे

- 5. Field work is to be done on the following tasks-
- Tree plantation
- Cleanliness campaign in village/locality/city/school/college, which includes cleaning of pond, cleaning of premises, cleaning of bus stand, cleanliness campaign in railway station.
- iii. Climate change study/global warming
- iv. Causes, effects and control of water pollution/soil pollution/noise pollution/air pollution
- Study of biodiversity in village/city/town
- vi. Study of man-made water sources, surface and ground water
- vii. Study of soil erosion

viii. Study of water and air quality standards

ix. Study of soil health parameters

x. Study of efforts made to increase the ground water level

फील्ड वर्क निम्न कार्यों पर किया जाना है-

i. वृक्षारोपण

ii. ग्राम /मोहल्ले/शहर/स्कूल/ कॉलेज में स्वच्छता अभियान, जिसके अंतर्गत तालाब की सफाई, परिसर की सफाई,बस स्टैंड की सफाई, रेलवे स्टेशन में स्वच्छता अभियान

iii. जलवायु परिवर्तन अध्ययन/ग्लोबल वार्मिंग

iv. जल प्रदूषण/मृदा प्रदूषण/ध्विन प्रदूषण/वायु प्रदूषण का कारण , प्रभाव एवं नियंत्रण

v. ग्राम/शहर/क़स्बे में जैव विविधता का अध्ययन

vi. मानव निर्मित जल स्त्रोत, सतही एवं भूजल का अध्ययन

vii. मृदा अपरदन का अध्ययन

viii. जल एवं वायु की गुढ़वत्ता मानकों का अध्ययन

ix. मृदा की गुढ़वत्ता मानकों का अध्ययन

x. भू-जलस्तर को बढ़ाने के लिए किये गए प्रयासों का अध्ययन

प्रोजेक्ट फाइल पर प्लास्टिक कवर का प्रयोग नहीं करना है। नोट: -Do not cover your project file with plastic sheet.

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### /// <u>प्रोजेक्ट वर्क रिपोर्ट प्रमाण पत्र ( प्रारूप)///</u>

प्रमाणित किया जाता है कि	(विद्यार्थी का नाम), पिता का
नामरोल	नंबर
कक्षाने, विषय	
पर ग्राम/शहर/वार्ड/कस्बे	में फिल्ड वर्क का कार्य
सफलतापूर्वक संपन्न किया है।	
हम इनके उज्जवल भविष्य की कामना करते हैं।	3180/20
जनप्रतिनिधि/ अधिकारी के हस्ताक्षर	$\mathcal{D}$
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Representation	7. Vandans	14
(Professor Science Faculty Other Dept.)		

## Green campus initiatives

An initiative has been taken in the college to have a green campus i.e. eco-friendly zone for the students to study in which a green environment is provided to the students. The use of any kind of plastic is banned here so that it does not harm nature and for this various policies have been made and implemented.



#### Plantation by vc technical university prof. M.K. VERMA

For creation of green campus, initiative has been taken through various programmes. In this, tree plantation programme was conducted in the Mahavidyalaya campus by Vice Chancellor of Technical University, Professor MK Verma Sir, who came as a guest in a national conference.







#### CLEANING PROGRAM BY NSS AND NCC UNIT

For the green campus initiative, various activities are organised by the NCC unit and NSS unit of the college in which the professors and students of the college donate their labour.



#### SOME INITIATIVES ABOUT GREEN CAMPUS

# दिग्विजय महाविद्यालय के सृजन संवाद स्थित वाटिका में भूगोल विभाग द्वारा वृक्षारोपण

राजनांदगांव (नांदगांव टाइम्स)। श्रासकीय दिग्विजय स्वशासी स्नातकोत्तर महाविद्यालय राजनांदगाँव (छ.ग.) के प्राचार्य डॉ. के एल. टांडेकर के निर्देशानुसार विभागीय गतिविधि के अंतर्गत महाविद्यालय

परिषर को हरा-भरा रखने के लिए वृक्षारोपण हेतु सृजन संवाद के पास स्थित वाटिका में सभी विभागों को अलग-अलग स्थान आर्बोटत किया गया। भूगोल विभाग को आंबटित स्थल पर वृक्षारोपण का कार्य



विभागाध्यक्ष डॉ. कृष्ण नंदन प्रसाद के नेतृत्व में रबर का पौधा के साथ तुलसी, पारिजात, गुड़हल जैसे औषधीय पौधे लगाये गये। वृक्षारोपण हेतु एम.ए.(भूगोल) स्नातकोत्तर परिषद के प्रथम व

तृतीय सेमेस्टर के विद्यार्थियों ने समर्पण भाव से इस लघु, परन्तु अति महत्वपूर्ण कार्य को बहुत ही उत्साह से पूरा किया तथा इन पौधों की नियमित देख-रेख करने का संकल्प लिया।

### वृक्षों को राखी बांधकर रक्षाबंधन मनाया गया

राजनांदगांव (दावा)। शासकीय दिगिव ज्य महाविद्यालय राजनांदगांव में संचालित राष्ट्रीय सेवा योजना इकाई द्वारा रक्षाबंधन के अवसर पर एक रक्षा सूत्र हम सबके प्राण दाता के



लिए इस सोच को लेकर महाविद्यालय में रासेयो गार्डन एवं अन्य विभागीय गार्डन में रक्षा सूत्र के रूप में वृक्षा सूत्र राखी बांधकर रक्षाबंधन मनाया गया। जिसमें राष्ट्रीय सेवा योजना कार्यक्रम अधिकारी प्रो. संजय सप्तर्षि एवं करुणा रावते के साथ साथ सीनियर स्वयंसेवक विनोद टेम्बुकर, स्वयंसेवक राहुल एवं सीनियर स्वयंसेविका भुनेश्वरी, स्वयंसेविका मुस्कान, शालिनी, टिकेश्वरी, प्रतिज्ञा डॉली एवं अन्य स्वयंसेवी उपस्थित रहें।

## Rajnandgaon - 23 Oct 2023 - rajn3 epaper.navabharat.news

# नवभारत



#### दिग्विजय महाविद्यालय के वाटिका में पौधरोपण

राजनांदगांच. शासकीय दिग्विजय स्वशासी स्नातकोत्तर महाविद्यालय राजनांदगांव द्वारा परिपर को हरा-भरा रखने के लिए वृक्षारोपण हेतु स्जन संवाद के पास स्थित वाटिका में सभी विभागों को अलग-अलग स्थान आवंदित किया गया. भूगोल विभाग को आंविटित स्थल पर वृक्षारोपण का कार्य विभागाच्यक्ष डॉ. कृष्ण नंदन प्रसाद के नेतृत्व में स्वर का पीधा के साथ तुलसी, पारिजात, गुडहल जैसे औपधीय पीधे लगाये गये. वृक्षारोपण हेतु एम.ए.(भूगोल) स्नातकोत्तर परिपद के प्रथम व तृतीय सेमस्टर के विद्यार्थियों ने इन पीधों की नियमित देख-रेख करने का संकल्य लिया. इस अवसर पर विभाग के दोनों अतिथि व्याख्याता डॉ. श्रद्धा साह, एवं होमराज दाउरा भी उपस्थित रहे.





Govt. Digvijay Auto. PG College, Rajnandgaon