Criterion – 2 Teaching-Learning and Evaluation NAAC- SSR (2nd Cycle)



ETERNAL UNIVERSITY

BARU SAHIB, SIRMOUR-173101 HIMACHAL PRADESH

2.2.1(1)

Learning needs of advanced learners



ETERNAL UNIVERSITY BARU SAHIB, SIRMOUR-173101 HIMACHAL PRADESH

Special Programmes for Advanced Learners

Eternal University has a structured assessment system to identify advanced learners in each programme considering previous academic performance $(10^{th}/10+2/graduate marks/grades and a baseline assessment related to basic courses related to programmes. The following programmes were effective implemented for identification, nurture and support of advanced learners.$

Special Programs and various initiatives

- Workshops, Seminars and Webinars: Organize workshops, seminars, webinars and guest lectures by experts to provide deeper insights into subject matter.
- Research opportunities: Encourage the students for research, various internships programs offered by industries and collaborations with faculty in academic research.

Exposure and Networking

• Conferences and Competitions: Support participation in national and international conferences, competitions, and symposiums to showcase their skills and gain exposure.

Academic and Carrier Advancement

- Competitive examination: Conduct Coaching classes for competitive exams like CSIR-NET, UGC-NET, IELTS etc.
- Higher Studies counselling: Provide counselling for pursing higher education and scholarships in reputed institutions globally.

Recognition and Rewards

- Publications: Encourage students to publish their research papers in reputed journals and present research paper at national and international conferences.
- Rewards: Every year, the best outgoing and passed-out students are appreciated with gold medals.



Special programmes for differential learning needs of advanced learners

Sr.	Description	Page No.
No.		
1.	Participation in workshops, conferences and seminars	3
2.	Higher Education and Research	35
3.	Placements in Government/Private sectors	38
4.	Excellence in Competitive Examinations	46
5.	Coaching classes for advanced learners	58
6.	Research Publications	63

1. Participation in workshops, conferences and seminars







Certificate of Participation

This is to certify that Achhada Ujalkaun has participated in the

Slogan Making Competition

nn

"ANTIBIOTIC RESISTANCE"

on 20th March, 2023

Your contribution towards creating awareness on this critical issue is highly appreciated



National President IMA

oternal



Dr. Sharad Kumar Agarwal Dr. Anilkumar J. Nayak Honorary Secretary General, IMA





Dr M. Muraleedharan Convenor, IMA-AMR Standing Committee



BARU SAHIB, SIRMOUR- 173101, HIMACHAL PRADESH, INDIA

Online Workshop

On

Importance of Intellectual Property Rights in Academia (IIPRA-2021)

March 27, 2021

Certificate of Participation

This is to certify that Ms. Ujalkaur Achhada Participated in online workshop on Importance of Intellectual Property Rights in Academia (IIPRA-2021), Organized By IPR Cell, Eternal University, Baru Sahib (HP) in association with Himachal Pradesh Patent Information Centre (HPPIC), Himachal Pradesh Council for Science, Technology and Environment (HIMCOSTE), Shimla, (HP).

Sunil Kumar (Coordinator)

AcoAhlus Dr. Amrik Singh Ahluwa (Chairman)

der Singh (Patron)







TERNAL UNIVERSIT BARU SAHIB, SIRMAUR-173101, HIMACHAL PRADESH, INDIA



Dr. Davinder Singh

(Patron)

International Conference On

Water, Agriculture, Dairy and Food Processing for Sustainable Economy (WADFPSE-2022)

Certificate of Participation



rnal







CERTIFICATE OF PARTICIPATION

ARG

UMANG and MyGov congratulate

Yukta Arora

on successfully completing the "UMANG APP QUIZ EXPERT". We salute your effort. Keep participating...!

> Abhishek Singh, IAS President & CEO, National e-Governance Division Ministry of Electronics & IT, Government of India









CERTIFICATE OF Appreciation



Dr. Neelam Kaur Dr. Neelam Kaur Dean, Akal College of Health & Allied Sciences Eternal University

His Halits DR. H.S Dhaliwal VICE CHANCELLOR **ETERNAL UNIVERSITY**





B K Birla Institute of Engineering & Technology

Pilani, Rajasthan, India

Approved by All India Council for Technical Education and Affiliated to Bikaner Technical University

Online 2nd International Conference on

Recent Advances in Computational Mathematics & Engineering

(30 - 31 May, 2022)

Organized by

Department of Applied Sciences & Humanities

CERTIFICATE OF PARTICIPATION

This is to certify that Dr/Mr./Ms. PRITI SHARMA of Eternal University, Baru Sahib, Himachal Pradesh has presented the paper titled "Landau Legendre wavelet Galerkin method applied to study the two-phase moving boundary problem of heat transfer in finite region" in the Two day Online 2nd International Conference on Recent Advances in Computational Mathematics & Engineering, held from 30/05/2022 to 31/05/2022 at B K Birla Institute of Engineering & Technology, Pilani.

Dr. A. K. Malik Convener- RACME-22, BKBIET

Dr. L. Solanki

Principal, BKBIET

Dr. S. M. Prasanna Kumar Director, BKBIET

www.bkbiet.ac.in

IFCKC Azadi Ka Amrit Mahotsav JNIVERSITY 6th International Conference on Mathematical Modelling, Applied Analysis and Computation-2023 (ICMMAAC-23) Organized by : Department of Mathematics, School of Science, JECRC University August 03-05, 2023 Certificate This is to certify that Prof./ Dr./Mr./Ms. Prite Sharma of Eternal University, Barn Sahib, Himachal Pradish has participated/delivered an invited talk/chaired a session/presented a paper in technical session as per program of ICMMAAC-23 held at JECRC University, Jaipur (Raj.) India. Title of the talk/paper is <u>Study of Heat transfer in Parous Fin with Temperature</u> Dependent Properties. Dr. G. S. Paliwal Dr. Pradip Kumar Gaur Dr. Monika Jain Dr. Vishwas Deep Joshi Prof. (Dr.) Jagdev Singh



















Department of English (SF) Holy Cross College (Autonomous) Nagercoil, Kanyakumari Tamilnadu, India www.holycrossngl.edu.in

International Conference on Cultural Studies

Certificate

This is to certify that Vrinda Shandil, Assistant Professor, Dr. Y. S. P. G. P. G. College, Nahan, H. P. India has presented a paper titled A Feminist Analysis of Kamala Das' My Story in the Two Day International Conference on Cultural Studies Organised by the Department of English (SF), Holy Cross College (Autonomous), Nagercoil, Kanyakumari, Tamilnadu, India in collaboration with Cape Comorin Trust, India on 17-18 December 2022.

Ms. M. Maria Helen Janoba Convener

Dr. R. S. Regin Silvest President, Cape Comorin

Dr. Sr. Sahaya Selvi Principal



Department of English (SF) Holy Cross College (Autonomous) Nagercoil, Kanyakumari Tamilnadu, India www.holycrossngl.edu.in

International Conference on Cultural Studies

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Ms. M. Maria Helen Janoba Convener

Dr. R. S. Regin Silvest

Dr. R. S. Regin Silvest President, Cape Comorin

Dr. Sr. Sahaya Selvi Principal



Certificate of Participation

This certificate is awarded to

UJALKAUR

for participation in Online IP Day Quiz On

World Intellectual Property Day 2020

Organized by

Amar Shaheed Baba Ajit Singh Jujhar Singh Memorial

COLLEGE OF PHARMACY, BELA (Ropar) Punjab







COPBELA/IPO-20/1495



Dr. Shailesh Sharma **Convener & Director**

Satvir Singh **Co-ordinator**

The Pioneer Pharmacy Institute of Punjab









Certificate of Participation

This is to certify that

Ujalkaur

from Eternal university baru sahib has

Successfully attended the India First Leadership Talk webinar broadcasted

On 2nd May, 2020 by MHRD's Innovation Cell

y Jeve

Dr. Abhay Jere Chief Innovation Officer, MHRD's Innovation Cell







On

Innovative Applications of Metagenomics Data Analysis in Life Sciences

26th May, 2022

Certificate of Participation

Jointly Organized by

Biokart India Pvt. Ltd.

&

Centre for Innovation, Incubation and Entrepreneurship (CIIE)

Babasaheb Bhimrao Ambedkar University, Lucknow

(Vikram S.) Director & CEO

Novien Arora

(Naveen Kumar Arora) Professor in-charge, CIIE Dean, School of Earth & Environmental Sciences BBA University Bharati Vidyapeeth (Deemed To Be University) New Law College, Pune, Maharashtra (India) Social Science & Management Welfare Association Maharashtra Youth Economic Association Maharashtra & The Global Publisher

National Conference on Multidisciplinary Research in Socio-Economic Development of Maharashtra

DATE : 31 December 2023, Sunday VENUE : SSMWA (Maharashtra), India

Certificate

This is to certify that Prof/Dr/Shri/Mrs./Mr./Ku.

Vrinda Shandil

University / College / Organization

Research Scholar, Eternal University, Baru Sahib, Himachal Pradesh

Registration No. 135. Subject English

n Multidisc

attended the National Conference on Multidisciplinary Research in Socio-Economic Development of Maharashtra. National Conference jointly organized by Bharati Vidyapeeth (Deemed To Be University) New Law College, Pune, Maharashtra (India), Social Science & Management Welfare Association Maharashtra, Youth Economic Association Maharashtra & The Global Publisher, India.

He / She successfully presented a paper entitled.....

Empowerment through Adversity: The Resilience of Female Characters in Alice Walker's The Color Purple





Department of Botany organized an online workshop on BONSAI (11 September 2021)



Akal College of Engineering and Technology, Eternal University, Baru Sahib organized National Workshop on "Solar and Smart Energy Systems for Sustainable Environment held on 6-7 April, 2018



Workshop On "Real Time Applications Using Next Generation IoT Technology

DST (SERB) Sponsored Two Days National Level Workshop on Real Time Applications Using Next Generation IoT Technology organized by Akal College of Engineering & Technology (ACET), Eternal University, Baru Sahib on 20-21 April, 2018.



WORKSHOP-CUM-TRAINING PROGRAM



Eternal University Baru Sahib organized a "Fabrication of Low-Cost Solar Drying System" workshop at Gram Panchayat: Maatal Bakhog (Rajgarh) District: Sirmaur on February 23, 2020.

NATIONAL CONFERENCE ON SUSTAINABILITY



National Conference on Sustainability Theme: Methods, Practices & Adaptation-Indian Perspective (2021)

WORKSHOP ON IMPORTANCE OF INTELLECTUAL PROPERTY RIGHTS IN ACADEMIA



Eternal University, Baru Sahib Organised an online workshop on 27th March 2021.

WORK IN RAAGADARI MUSIC

"Elements of Bhakti Rasa in Music" & "Composition Work in Raagadari Music"

Date: 25.4. 2022 Time: 10:00 am to 4:00 pm

Ву

Prof. Dr. Chamanlal Verma

Specialist in Hindustani Vocal

Ex-Dean & Chairperson HPU, Shimla

Mode – Offline

Venue: Performance Room, Dept. of Music (Certificates will be provided to the participants)

ORGANIZER Department of Music CONVENER Dr. Simarpreet Kaur

Organizing committee member: All faculty of Dept. of Music, EU

Department of Music Akal College of Arts and Social Science, Eternal University organized a workshop on the Element of Bhakti Rasa in Music & Composition Work in Raagadari Music on 25 April 2022.

NATIONAL CONFERENCE ON CURRENT SCIENTIFIC INNOVATIONS & RESEARCH IN PLANT BIOLOGY



NEED TO UPGRADE COMMUNICATION SKILLS FOR PROFESSIONAL PURPOSE



SESSION ON AUTISM SPECTRUM DISORDER (ASD)



J-GATE TRAINING WORKSHOP FOR RESEARCH SCHOLARS



EU IQAC <iqac@eternaluniversity.edu.in>

Fwd: Training Programe of online J-Gate Journals access on Dated 26th Sep-2022 Monday

1 message

VC Office <contact@eternaluniversity.edu.in> Fri, Sep 23, 2022 at 4:59 PM To: Baldev Sohal

version of the second action Kaur" «drmanjindereco@eternaluniversity.edu.in», "Ms. Kuldeep Kaur" «kuldeepeco@eternaluniversity.edu.in», "Dr. Kajal Chaudhary" «drkajalcom@eternaluniversity.edu.in», "Mr. Ambar Srivastava" «Ambarcom@eternaluniversity.edu.in», Amit Kumar <amit@eternaluniversity.edu.in>, tanu sharma <tanusharmapu@gmail.com>, babitaacn@eternaluniversity.edu.in>, Annu Kumar <amit@eternaluniversity.edu.in>, tanu sharma <tanusharmapu@gmail.com>, babitaacn@eternaluniversity.edu.in>, lovepreetacn@eternaluniversity.edu.in>, iaiswalmamta2&@gmail.com, Eternal University Registrar <registrar@eternaluniversity.edu.in>, examination@eternaluniversity.edu.in, EU Admissions <admissions@eternaluniversity.edu.in>, VC Office <contact@eternaluniversity.edu.in>, EU IQAC <iqac@eternaluniversity.edu.in>, skchauhan1958@gmail.com, acass@eternaluniversity.edu.in, EV Admissions@eternaluniversity.edu.in>, skchauhan1958@gmail.com, acass@eternaluniversity.edu.in, EV Admissions@eternaluniversity.edu.in>, skchauhan1958@gmail.com, acass@eternaluniversity.edu.in, EV Admissions dryogeetathakur@eternaluniversity.edu.in, dsw@eternaluniversity.edu.in, acet@eternaluniversity.edu.in, ardeep13@yahoo.com, ace@eternaluniversity.edu.in, dsw@eternaluniversity.edu.in, acet@eternaluniversity.edu.in, aced@eternaluniversity.edu.in, aced@eternaluniversity.edu.in, aced@eternaluniversity.edu.in, pritesh@eternaluniversity.edu.in, krishan@eternaluniversity.edu.in, drbaldevsinghagro@eternaluniversity.edu.in, pritesh@eternaluniversity.edu.in, krishan@eternaluniversity.edu.in, drbaldevsinghagro@eternaluniversity.edu.in, drbaldevsinghagro@eternaluniversity.edu.in, pritesh@eternaluniversity.edu.in, krishan@eternaluniversity.edu.in, drbaldevsinghagro@eternaluniversity.edu.in, drbaldevsi kamal@eternaluniversity.edu.in, puneetnegi@eternaluniversity.edu.in, drnasibmicro@eternaluniversity.edu.in, neelamthakur@eternaluniversity.edu.in, puneentegi@eternaluniversity.edu.in, drinasibrito@eternaluniversity.edu.in, pawankumarmang@eternaluniversity.edu.in, ankitpathania6067@gmail.com, drpriyankaento@eternaluniversity.edu.in, sushma@eternaluniversity.edu.in, praneetchauhan@eternaluniversity.edu.in, neeraj@eternaluniversity.edu.in, drvikrantgpb@eternaluniversity.edu.in, droopbiotech@eternaluniversity.edu.in, ajar@eternaluniversity.edu.in, sapna@eternaluniversity.edu.in, imran@eternaluniversity.edu.in, amitsaurabh@eternaluniversity.edu.in, drdivyahort@eternaluniversity.edu.in, dryogendrahort@eternaluniversity.edu.in, tajendra@eternaluniversity.edu.in, draseerahmed@eternaluniversity.edu.in, drmohitaec@eternaluniversity.edu.in, dirakeshagro@eternaluniversity.edu.in, dreakeshagro@eternaluniversity.edu.in, deepakkumar20031993@gmail.com, Manjuagro@eternaluniversity.edu.in, drrakeshagro@eternaluniversity.edu.in, drifanft@eternaluniversity.edu.in, rajatft@eternaluniversity.edu.in, drisimarpreetmusic@eternaluniversity.edu.in, geetaeng@eternaluniversity.edu.in, 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drbbotany@eternaluniversity.edu.in, drbbotany@eternaluniversity.edu.in, bdsharma.lias@gmail.com, divjotkour@eternaluniversity.edu.in, drgaganzoology@eternaluniversity.edu.in, kanwaljit58@gmail.com, drjaswantbed@eternaluniversity.edu.in, manpreetbed@eternaluniversity.edu.in, drjasvirbed@eternaluniversity.edu.in, manpreetbed@eternaluniversity.edu.in, manpreetbed@eternaluni jaswinderacn@eternaluniversity.edu.in, manpreetaacn@eternaluniversity.edu.in, kavitaacn@eternaluniversity.edu.in, vidhiacn@eternaluniversity.edu.in, komalacn@eternaluniversity.edu.in, sameekshaacn@eternaluniversity.edu.in, mishaacn@eternaluniversity.edu.in, neenurajput@gmail.com, ushaacn@eternaluniversity.edu.in, umaacn@eternaluniversity.edu.in, muthukumaranacn@eternaluniversity.edu.in, sumanacn@eternaluniversity.edu.in, chanchalacn@eternaluniversity.edu.in, drharpreetacn@eternaluniversity.edu.in, amarsinghos@eternaluniversity.edu.in, rajeshoa@eternaluniversity.edu.in, hardeepoa@eternaluniversity.edu.in, sukhveeroe@eternaluniversity.edu.in, rds@eternaluniversity.edu.in, manpreetit@eternaluniversity.edu.in, babitalib@eternaluniversity.edu.in, anita@eternaluniversity.edu.in, amita@eternaluniversity.edu.in, amita@eternaluniversity.edu.in, sandeepoa@eternaluniversity.edu.in, sandeepoa@eternaluniversity.edu.in, ksboparai1953@gmail.com, mandeepad@eternaluniversity.edu.in, layakfa@eternaluniversity.edu.in, motila@eternaluniversity.edu.in, rajeev@eternaluniversity.edu.in, anopla@eternaluniversity.edu.in, anopla@eternaluniversity.edu.in, sontkauroa@eternaluniversity.edu.in, accounts@eternaluniversity.edu.in, designer@eternaluniversity.edu.in Cc: President Kts <secretarykts@barusahib.org>, "pvc@eternaluniversity.edu.in" <pvc@eternaluniversity.edu.in>

Respected Sir/Madam

Forwarded for your information, please.

tps://mail.google.com/mail/u/0/?ik=0fb4d73f91&view=pt&search=all&permthid=thread-f%3A1744759745398863659&simpl=msg-f%3A1744759... 1/2

24/22, 9:24 AM

Thanking you

Eternal University Mail - Fwd: Training Programe of online J-Gate Journals access on Dated 26th Sep-2022 Monday

Secretary Vice Chancellor Eternal University

F-----

INTERNATIONAL CONFERENCE- WADFPSE-2022

International Conference on "Water, Agriculture, Dairy and Food Processing for Sustainable Economy"



WORKSHOP ON PEDAGOGICAL INITIATIVES



WORKSHOP FOR ENHANCING COMMUNITY HEALTH NURSING PRACTICES



NURTURING EXCELLENCE IN OBSTETRICS & GYNAECOLOGY: A COMPREHENSIVE WORKSHOP





Nurturing Excellence in Obstetrics & Gynaecology: A Comprehensive Workshop 12th-13th May, 2023
2. Higher Education and Research

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NATIONAL ELIGIBILITY TEST FO	OR ASSISTANT PROFESSOR
NTA Ref. No: 220510473130	Roll No: CH01660011
Confied that JAGNEET KAUR	
Sun/Daughter of JATINDER KAUR	
and MAHINDER SINGH	has qualified
the UGC-NET for eligibility for Assistant Prof	lessor hold on 12.10.2022
As per information provided by the candidate, he/s his/her Master's degree or equivalent examination lor UGC-NFT	he had completed/appeared or was pursuing in the related subject at the time of applying
The date of eligibility for Assistant Professor is i.e., 05.11.2022, or the date of comp examination with required percentage of marks with UGC-NET result, i.e. by 04.11.2024, w	the date of declaration of UGC-NET result, sletion of 'Master's degree or equivalent hin two years from the date of declaration of hichever is later.
This is an electronic certificate only, its authentic	ity and category in which the candidate had
appeared should be verified from Nationa	l Testing Agency (NTA) by the
institution/appointing authority. This electronic ce RR Code.	rtificate can also be verified by scanning the I
The validity of this electronic certificate is forever.	Unkarasher
Date of issue: 16.12.2022	Senior Director, NTA
NAME AND DESCRIPTION OF A DESCRIPTION OF	ation provided by the candidate in his/her online Application







First Floor, NSIC-MDBP Building, Okhla industrial Estate, New Delhi, Delhi 110020 (India), Phone: 011-69227700, 011-40759000

JRF AWARD LETTER

NTA Ref. No.: 220510473130 JAGNEET KAUR Son/Daughter of JATINDER KAUR and MAHINDER SINGH Subject: Education Roll No.: CH01660011



Dated: 16.12.2022

Dear Candidate,

I am pleased to inform you that you have qualified for Junior Research Fellowship (JRF) and eligibility for Assistant Professor in the National Eligibility Test (UGC-NET) conducted for December 2021 and June 2022 (merged session). The tenure of fellowship is five years and it commences from the date of declaration of NET result, i.e., 05.11.2022 (or) from the date of admission under M.Phil./Ph.D. (or) from the date of joining M.Phil./Ph.D. programme, whichever is later. The summary of financial assistance offered under the scheme is mentioned at Annexure I available on www.ugc.ac.ln/net/rf

The Awardee is required to get admission and registration for regular and full time M.Phil./Ph.D. course in a University/Institution/College recognized by UGC at the first available opportunity but not later than three years from the date of issue of this award letter. University/Institution/College is requested to process for award of JRF based on this letter, in accordance with the procedure available on www.ugc.ac.in/net/if.

It may be noted that the fellowship amount shall be disbursed through Canara Bank to bank account of the Awardee (any bank) directly. UGC has developed a dedicated web portal (https://scholarship.canarabank.in) for capturing data of the awardee. The Universities/Colleges/Institutions will link the data of the awardee with the master data on the UGC web portal with unique Maker/Checker lds which have already been provided to them along with the passwords. The Universities/Colleges/Institutions shall update the information in the master data (regarding monthly payment confirmation, HRA, up-gradation, resignation etc.) of the beneficiaries on monthly basis. Based on the data updated on UGC web portal by the concerned Universities/Colleges/Institutions, the payment of the fellowship will be made to the beneficiaries (Detailed process available at https://www.ugc.ac.in/ogr_notices.aspn?id=2153).

It may also be noted that UGC has proposed to link "AADHAAR" with bank account of students so that there can be direct cash transfer and effective disbursal of fellowship into bank account of the student. In this regard, Secretary, UGC has already requested the universities to help students in Aadhaar enrolment vide D.O. No. F.14-34/2011 (CPP-II) dated 11.01.2013.

It may please be noted that the award is liable to be cancelled by Implementing/Awarding agency and it will also attract legal action against the Awardee in the following cases:

1. If the awardee is found to be ineligible to receive the award at any point during the entire duration of fellowship,

- 11. Misconduct of Awardee,
- iii. Unsatisfactory progress of research work,
- iv. Failure in any examination related to M.Phil./Ph.D.,
- v. In case any other fellowship is drawn from other source(s).
- vi. Concealment of facts.

The e-Certificate of eligibility for Assistant Professor has been uploaded on https://ecertificate.nta.ac.in. The eligibility of the candidate is to be ensured by the institution/appointing authority. The category in which the candidate had appeared may be verified from NTA.

This electronic JRF award letter can also be verified by scanning the QR Code. With best wickes

(Dr Sadhana Parashar) Senior Director

Note: NTA has issued the electronic JRF ascard letter in the basis of information provided by the candidate in his/her online application form. The appointing authority should verify the original records/certificates of the candidate while considering him/her for JRF ascard or appointment, as the NTA will not be liable for any failse information provided by the candidate. The NTA is only responsible for the result which can be verified from the repository available in the website of NTA (agenet.na.nc.hs). The candidate must half the minimum eligibility conditions as laid down in the souffication for UGC-NET.

3. Placement in Government/ Private Sector



अखिल भारतीयआयुर्विज्ञान संस्थान,गोरखपुर

All India Institute of Medical Sciences, Gorakhpur

(स्वास्थ्य एवं परिवार कल्याण मंत्रालय भारत सरकार द्वारा स्थापित एक स्वायत्त निकाय) (An autonomous organization under the Ministry of Health & Family Welfare, Govt. of India)

Admn 2022-23 398 File.No.: AIMS NKP

दिनांक / Date: 22/04/2022

सेवा में/To,

श्री/श्रीमती. संदीप कौर मान

Mr. /Ms. SANDEEP KAUR MANN,

ADD.- HNO 210/4, DURGA COLONY, TARUWALA, PAONTA SAHIB, Paonta Sahib , HIMACHAL PRADESH, India, 173025

Sub: Offer of appointment to Mr./Ms. SANDEEP KAUR MANN for the post of Nursing Officer at All India Institute Medical Sciences, Gorakhpur.

परिचर्या अधिकारी के पद हेतु आपके आवेदन तथा दिनांक 20.11.2021 को आयोजित हुई परीक्षा तथा दिनांक 04.04.2022–13.04.2022 को आयोजित ऑनलाइन दस्तावेजों के सत्यापन के संदर्भ में अखिल भारतीय आयुर्विज्ञान संस्थान,गोरखपुर एतद द्वारा आपको वेतन संरचना 7 वें वेतन आयोग के मैट्रिक्स लेवल–7 (9300–34800 तथा ग्रेड वेतन रू. 4,600/-) और समय–समय पर गोरखपुर में सदृश पदों पर नियुक्त केन्द्रीय सरकार के कर्मचारियों को अनुमेय भत्तों के साथ परिचर्या अधिकारी के पद हेतु नियुक्ति प्रस्ताव प्रस्तुत करता है।

With reference to your application for the post Nursing Officer and on the basis of examination held on 20-11-2021 and online document verification held from 04-04-2022 to 13-04-2022 for the post of Nursing Officer. All India Institute of Medical Sciences, Gorakhpur offers you appointment to the post of Nursing Officer Level-7 of Pay matrix of 7th CPC (pay scale of Rs. 9,300 – 34,800/- with Grade Pay of Rs. 4,600/-) and other usual allowance as admissible from time to time to the Central Government Employees of similar category stationed at Gorakhpur.

2. अन्य शर्ते निम्नानुसार हैं/ Other terms & conditions are as mentioned below:-

(i) वे दो वर्ष की अवधि हेतु परिवीक्षा पर रहेंगे/रहेंगी, या भारत सरकार के सीसीएस नियमावली के अनुसार मामले के आधार पर संस्थान के निर्णय के अनुसार लंबी अवधि पर। परिवीक्षा—अवधि के दौरान, उन्हें संतोषजनक सेवाएं प्रदान करना अपेक्षित है, जिसमें असफल रहने पर उनकी सेवाएं किसी भी समय बिना कोई नोटिस दिए अथवा बिना कोई कारण बताए समाप्त कर दी जाएंगी। तथापि, नियुक्ति प्राधिकारी परिवीक्षा की अवधि बढ़ा सकते है। स्थायीकरण के विनिर्दिष्ट आदेशों के अभाव में, नियुक्ति को परिवीक्षा पर जारी रहना समझा जाएगा। परिवीक्षा अवधि के दौरान आप अस्थायी कर्मचारी होंगे और आप सीसीएस (अस्थायी सेवा) नियम 1965 के द्वारा संचालित होंगे।

He/She shall be on probation for a period of two years or longer period as decided by the Institute on case to case basis as per CCS rules of Government of India. During the period of probation, he/she shall be required to put in satisfactory services failing which his/her services shall be terminated at any time without any notice or reason being assigned for the same. The appointing authority may, however, extend the period of probation. In the absence of specific orders of confirmation, the appointment will be deemed to continue on probation. During the period of probation, you will be temporary employee and will be governed by the CCS (Temporary Service) Rules, 1965.

(ii) उनकी नियुक्ति दोनों पक्षों में किसी भी पक्ष अर्थात नियुक्त व्यक्ति अथवा नियुक्ति प्राधिकारी द्वारा किसी भी समय बिना कोई कारण बताए एक माह का नोटिस देकर समाप्त की जा सकती है। संस्थान को यह अधिकार है कि वह नोटिस वेतन के बदले एक माह से अतिरिक्त अवधि हेतु वेतन का भुगतान कर सकता है। इसी प्रकार नियुक्त व्यक्ति भी यदि अपने पद से त्यागपत्र देना चाहता/चाहती है तो वो भी एक माह की नोटिस अवधि के अतिरिक्त समय के बदले वेतन एंव भत्तों को संस्थान में जमा करके ऐसा कर सकते हैं।

His/her appointment may be terminated at any time with a month's notice by either side, viz., the

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- appointee or the appointing authority, without assigning any reason whatsoever. It will be open to the Institute to pay in lieu of notice pay for the period by which the notice falls short of one month. Similarly, if he/she wishes to resign his/her post, he/she may do so by depositing with the Institute, pay and allowances in lieu of the notice period by which it falls short of one month.
- 3. सभी प्रकार के निजी व्यवसाय पूर्णतः प्रतिबंधित है।
- All kind of private practices are strictly prohibited.
- 4. यह नियुक्ति, नियुक्त व्यक्ति की तरफ से निम्नलिखित पूर्व अपेक्षाओं के अनुपालन के अधीन होगी।

The appointment will be further subject to the compliance of the following pre-requisite on the part of appointee:-

(i) पदभार ग्रहण करने से पहले नियुक्त व्यक्ति को चिकित्सा बोर्ड से प्राप्त शारीरिक स्वस्थता प्रमाण–पत्र प्रस्तुत करना होगा जिसके लिए संबंधित व्यक्ति को एम्स के चिकित्सा बोर्ड से संपर्क करना चाहिए और चिकित्सा प्रमाण पत्र, जिसमे आपको पदभार ग्रहण करने के लिए चिकित्सकीय रूप से सक्षम बताया जाना चाहिए, को प्रस्तुत करने के पश्चात ही नियुक्ति प्रदान की जायेगी।

The production of a certificate of fitness from the Medical Board of the Institute before joining the post for which he/she should contact the Medical Board of the AIIMS, Gorakhpur. And joining will be subject to production of medical Certificate, which should state that you are medically fit for joining the post.

(ii) एमओएफ के संदर्भ में कार्यालय ज्ञाप संख्या एफ- 5-21/68/एम.ए. दिनांक 12 दिसंबर, 1958 को एक महिला उम्मीदवार, जो परीक्षणों के परिणामस्वरूप, 12 सप्ताह या उससे अधिक की गर्भवती पाई जाती है, को प्रसूति समाप्त होने तक अस्थायी रूप से अयोग्य घोषित किया जाना चाहिए। उम्मीदवारों को एक पंजीकृत चिकित्सक से फिटनेस के चिकित्सा प्रमाण पत्र के उत्पादन के अधीन, श्रम की तारीख के छह सप्ताह बाद फिटनेस प्रमाण पत्र के लिए फिर से जांच की जानी चाहिए।

In Terms of MOF OM No. F- 5-21/68/M.A. dated the 12th December, 1958 that a woman candidate, who as a result of tests, is found to be pregnant of 12 weeks' standing or over, should be declared temporarily unfit until the confinement is over. The candidates should be re-examined for a fitness certificate six weeks after the date of labour, subject to the production of medical certificate of fitness from a registered medical practitioner.

(iii) आपको को निम्नलिखित मूल प्रमाण-पत्र प्रस्तुत करने होंगे।

Production of the following Original Certificates.

- आयु का प्रमाण–पत्र (मान्यता प्राप्त बोर्ड से जारी 10वीं/मैट्रिक का प्रमाण पत्र)
 - The Certificate of Age (10th /Matriculation certificate from recognized board)
- शैक्षिक योग्यताओं के डिग्री/डिप्लोमा प्रमाण–पत्र।

The Degree/Diploma Certificate of educational qualifications.

- केन्द्रीय/राज्य सरकार के राजपत्रित अधिकारी या वैतनिक गजिस्ट्रेट से चरित्र के दो प्रमाण–पत्र। Two character certificate from a Gazetted officer of the Central/State Government or Stipendiary Magistrate.
- सभी तरह से विधिवत रूप से भरा हुआ तीन प्रतियों में संलग्न सत्यापन प्रपत्र जमा करवाना होगा।
 Submission of three copies of attestation form in duplicate, duly completed in all respect.
- यदि आप सरकारी सेवा में संलग्न है तो कार्यमुक्त / त्यागपत्र की स्वीकृति ।
 - Relieving/Acceptance of resignation, if candidates is in Government Sector.
- वैवाहिक स्थिति की घोषणा संबंधी जानकारी।
 - A statement of marital status declaration.

8)

- 7) माता पिता एवं परिवार के अन्य सदस्यों की निर्भरता की घोषणा।
 - Declaration of dependency of parents and other family members.

यदि नियुक्त व्यक्ति द्वारा की गई घोषणा या दी गई जानकारी झूठी साबित पाई जाती है या जानबूझकर कोई महत्वपूर्ण सूचना छिपाई जाती है तो उसे नौकरी से निकाला जा सकता है और सक्षम प्राधिकारी जो उचित

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समझे, अन्य कार्यवाई कर सकते हैं।

If any declaration given or information furnished by the appointee proves to be false or if the appointee is found to have willfully suppressed any material information you will be liable to be removed from service and such other action as the competent authority may deem necessary.

5. यह नियुक्ति सेवा में कार्यग्रहण के समय चरित्र प्रमाण पत्र प्रस्तुत करने के अधीन रहेगी। अभ्यर्थी को संबंधित जिले के पुलिस अधीक्षक से जारी पूर्ववर्ती व सत्यापन रिपोर्ट पेश करनी होगी जहां वह 21 वर्ष की आयु पूर्ण होने के पश्चार्त् पिछले 05 वर्षों के दौरान किसी स्थान पर एक वर्ष से अधिक निवासरत् रहा या रही हो।

The appointment is subject to production of character certificate at the time of reporting for joining duty. The candidates will have to produce antecedents / verification report (Police Verification) issued from the Superintendent of Police of concered District where he / she resided for more than one year at a time during the preceding five years after attaining the age of 21 years.

6. आपको वित्त मंत्रालय, आर्थिक मामलों का विभाग (ई.सी.बी एंव पी.आर. प्रभाग) के दिनांक 22.12.2003 की अधिसूचना संख्या 5/7/2003-ई.सी.बी. एवं पी.आर. में निहित प्रावधानों के तहत नई पेंशन योजना द्वारा विनियमित किया जाएगा।

You will be governed by New Pension Scheme as per the provision contained in the Ministry of Finance, Department of E conomic Affairs (ECB & PR Division), Notification No.5/7/2003 – ECB & PR dated 22.12.2003.

 सेवा की अन्य शर्ते, जैसे कि अवकाश के लाभ आदि, संस्थान के समय-समय पर यथा संशोधित नियमों के तहत प्रदान किए जाएंगें।

Other conditions of services such as benefits of Leave etc will be as, are provided for in the Rules, Regulations, etc. of the Institute as amended from time to time.

 आप यह भी नोट करें कि उन्हें संस्थान में समय-समय पर प्रचलित सभी कर्मचारियों पर लागू नियमों, विनियमों, अनुशासन और आचरण का पालन करना होगा।

You should also note that you shall have to conform to the rules, regulations, discipline and conduct prevalent in the Institute on the employee from time to time.

 कार्यालय अध्यक्ष को यह पूर्ण अधिकार प्राप्त है कि वह किसी अन्य कार्यालय में पदों पर नियुक्ति हेतु उनके आवेदन को अग्रेषित कर या रोक सकते है।

The Head of Office has full discretion to forward or to withhold any of his/her applications for appointment to posts elsewhere.

10. चिकित्सीय जांच या अन्य प्रमाण–पत्रों के प्राप्त करने के लिए या पद पर कार्यभार ग्रहण करने के लिए उन्हें किसी भी तरह का कोई यात्रा या अन्य भत्ता प्रदान नहीं किया जाएगा।

No travelling or other allowance will be paid to him/her for obtaining the medical or other certificates or for joining the post.

11. आप पूरे समय संस्थान के नियंत्रण में होंगे एवं प्राधिकृत अधिकारी द्वारा आपकी सेवाओं का उपयोग आवश्यक किसी भी तरीके से किया जा सकता है जिसके लिए आपको किसी भी प्रकार का पारिश्रमिक देय नहीं होगा।

You will be at the disposal of the Institute on whole time basis and your services may be utilized in any manner required by the Competent Authority of the Institute without claiming any additional remuneration.

12. मौजुदा अनुदेश के अनुसार एक व्यक्ति संस्थान में नियुक्ति के लिए पात्र नहीं होगा यदि उसने पति/पत्नी के जीवित रहने दाले व्यक्ति के साथ विवाह किया है या अनुबंध किया है या किसी पति या पत्नी के जीवित रहने हुए भी किसी अन्य व्यक्ति से विवाह किया है या अनुबंध किया है बार्ते ऐसा करने के लिए विशेष कारण हो जिससे केन्द्र सरकार यदि संतुष्ट हो तो उक्त नियम के संचालन से किसी भी व्यक्ति को छुट दी जाएगी। उक्त नियम के संचालन से किसी भी व्यक्ति को छुट दी जाएगी। उक्त नियुक्ति पत्र उपरोक्त आवश्यकताओं की पूर्ति एवं संस्थान के दिये गये प्रारूप में पदभार ग्रहण करने के समय घोषणापत्र प्रस्तुत

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करने के साथ सशर्त है। यदि आप उक्त नियम में किसी विशेष कारण से छूट प्राप्त करना चाहते है तो ऐसी परिस्थिति में आपको तत्काल अपना अभ्यावेदन प्रस्तुत करना होगा।

In accordance with the existing instruction, a person shall not be eligible for appointment in the Institute if you have entered into or contracted a marriage with a person having a spouse living or who having a spouse living has entered into or contracted marriage with any others person, provided that the Central Government may, if satisfied that there are special reasons for doing so, exempt any person from the operation of this rule. This offer of appointment is therefore, conditional upon satisfying the requirements mentioned above and also furnishing to this Institute a declaration to the effect in the prescribed Proforma at the time of joining. If, however, you desire to be exempted from the operation of this rule for any special reason(s), you should make a representation in this regard immediately.

13. यह नियुक्ति जाति प्रमाण पत्र तथा चरित्र प्रमाण पत्र के सत्यापन की जांच उचित माध्यम द्वारा किए जाने तक अस्थायी है। यदि सत्यापन में यह पाया जाता हैं कि उम्मीदवार का अ.जा./अ.ज.जा./ अ.पि.व./ई.डब्ल्यू.एस से संबधित होने का दावा असत्य है अथवा चरित्र संबंधी कोई त्रुटि पायी जाती है तो ऐसे उम्मीदवारों की सेवा बिना कोई आगे कारण बताए तत्काल समाप्त कर दी जाएगी और असत्य प्रमाण पत्र प्रस्तुत करने के लिए भारतीय दण्ड संहिता के प्रावधानों के तहत आगे कार्रवाई की जाएगी।

The appointment is provisional and is subject to the caste & character certificate being verified through the proper channels. If the verification reveals that the claim of the candidate regarding belonging to SC/ST/OBC/EWS category is found to be false, the services of such candidates will be terminated forthwith without assigning any further reasons and without prejudice to such further action as may be taken under the provisions of the Indian Penal Code for production of false certificate.

- 14. एम्स गोरखपुर आपकी सेवाएं बिना किसी कारण बताए और बिना परिवीक्षा अवधि के किसी भी नोटिस के बिना और किसी भी समय आपकी सेवाओं की पुष्टि के बाद भी बिना किसी नोटिस के समाप्त करने के लिए उत्तरदायी हैं।
 - आपकी ओर से इस पत्र में उल्लिखित शर्त का कोई भी उल्लंघन। (i)
 - आपके द्वारा प्रस्तुत कोई भी गलत जानकारी जैसे एक दिन के लिए भी अपने पिछले रोजगार डेटा में (ii) बेमेल, भुगतान पर्ची, फर्जी योग्यता की डिग्री, भविष्य में संबंधित प्राधिकरण से बाद की पुष्टि के दौरान पाया गया नकली अनुभव प्रमाण पत्र।
 - आपके द्वारा किसी भी भौतिक जानकारी का दमन। (iii)

Your services with the AIIMS, Gorakhpur are liable to be terminated under any of these circumstances without assigning any reason and without giving any notice during probation period and at any time even after confirmation of your services with AIIMS, Gorakhpur in the event of

- Any breach of the condition mentioned in this letter on your part.
- (i) Any false information furnished by you e.g. mismatch in your previous employment (ii) data even for a single day, pay slip, fake qualifying degree, fake experience certificate found in the course of subsequent confirmation from the concerned authority in future. Suppression of any material information by you. (iii)
- 15. यदि उपरोक्त शर्तो के साथ आपको नियुक्ति प्रस्ताव स्वीकार्य है तो कृपया ड्यूटी के लिए 30 दिन के भीतर रिपोर्ट करें और यदि निर्धारित तिथि तक अपने पद का कार्यभार ग्रहण नहीं करते हैं तो वे इस प्रस्ताव को रद/वापस समझें। If the offer is acceptable to you on the aforesaid conditions, you may please report yourself for duty within 30 days and if you do not join the post by the stipulated date; this offer of appointment will stand cancelled/withdrawn.

Page 4 of 5

Phone No.: 5512205501, 5512205585, website: www.aiimsgorakhpur.edu.in



(स्वास्थ्य एवं परिवार कल्याण मंत्रालय भारत सरकार द्वारा स्थापित एक स्वायत्त निकाय) (An autonomous organization under the Ministry of Health & Family Welfare, Govt. of India)

Administrative Officer, MNC Building Address:

All India Institute of Medical Sciences, Gorakhpur Kunraghat, Gorakhpur Uttar Pradesh - 273008 Email address - aoofficeaiimsgkp@gmail.com

16. उन्हें कार्यभार ग्रहण करने के समय स्वंय द्धारा सत्यापित एक फोटोग्राफ तथा क्रम संख्या 4 (ii) 1) से 7) तक हेतु दिए गए प्रमाण पत्रों की फोटो प्रतियों का एक सैट लाना अपेक्षित हैं।

He/she is required to bring a duly self-attested photograph and a set of photocopies of the documents as given against 4(ii) - 1) to 7), at the time of his/her joining.

The receipt of this letter may be acknowledged. उक्त पत्र की प्राप्ति के संबंध में अवगत करवाएं।

(भूपेश चंद्रा) (Bhupesh Chandra) प्रशासनिक अधिकारी Administrative Officer

भूपेश चंद्रा

BHUr प्रशासनिक अधिकारी Administrative Officer अखिल मारतीय आयुर्विज्ञान संस्थान, गोरखपुर/(उप्रज्ञ) २७३००ट All India Institute of Medical Sciences, Gerakhpur (U.P.) 273008

प्रतिलिपि प्रेषित / Copy forwarded to:-

- कार्यकारी निदेशिका, एम्स गोरखपुर 1. Executive Director AIIMS, Gorakhpur
- उप– निदेशक(प्रशासन), एम्स गोरखपुर 2. Deputy Director (Administration), AIIMS, Gorakhpur उप–चिकित्सा अधीक्षक, एम्स गोरखपुर
- 3. Deputy Medical Superintendent, AIIMS, Gorakhpur
- लेखा अनुभाग, एम्स गोरखपुर 4. The Account Section, Gorakhpur
- 5. गार्ड फाइल The Guard File.

Page 5 of 5

Phone No.: 5512205501, 5512205585, website: www.aiimsgorakhpur.edu.in



अखिल भारतीय आयुर्विज्ञान संस्थान ALL INDIA INSTITUTE OF MEDICAL SCIENCES ऋषिकेश—249203 Rishikesh-249203 Website: www.aiimsrishikesh.edu.in

AIIMSRISH/NORCET-4/175/012

Date: 26.09.2023

Offer of Appointment

Name: Mr/Ms SANDEEP KAUR MANN Father's Name: Mr RAJINDER SINGH MANN Roll No.: 4262991

Sub: Offer of appointment in respect of Mr/Ms SANDEEP KAUR MANN to post of Nursing officer (Staff Nurse Grade II) on Direct Recruitment Basis at All India Institute of Medical Sciences, Rishikesh.

Dear Candidate,

All India Institute of Medical Sciences, Rishikesh offer you an appointment to post of Nursing officer (Staff Nurse Grade II) in Level 7 as per 7th CPC (Rs.44900-142400) and other allowances as admissible to Central Government employees of your status on following terms and conditions:-

- 1. You will be on probation for a period 2 years from date of joining. Period may be extended at discretion of Competent Authority.
- During period of probation, you will be temporary employee and will be governed by CCS (Temporary Service) Rules, 1965. Your appointment is liable to be terminated in case of misconduct or if your antecedents are reported to be unsatisfactory at any stage.
- 3. Your appointment may be terminated at any time with one month notice by either side, viz, appointee or appointing authority without assigning any reason whatsoever. It will be open to Institute to pay, in lieu of notice salary for period by which notice falls short. Similarly, if he wishes to resign his post, he may do so by depositing with Institute pay and allowances in lieu of notice period.
- 4. Your appointment will be provisional and is subject to receipt of satisfactory police verification report on character and antecedents from district administration.
- 5. Appointment will be further subject to compliance of following pre-requisite on part of appointee:
 - i) Production of following certificates, in original, in proof of his academic qualification and age.
 - a) Good character certificate from Gazetted officers / Principal Nurse / Employer.
 - b) SC/ST/OBC/Caste certificate, if applicable.
 - c) Residence proof issued by Block/Sub- Division/ District Officers of your Permanent Residence.
 - d) Notarized Affidavit on a non-judicial stamp paper of Rs. 10/- as per Annexure A
 - e) All Original Documents.
 - ii) Medical examination as per policy of institute.
- 6. It should be noted that the appointment is provisional and is subject to verification of the SC/ST/OBC/EWS/PH (including the claim not to belong to creamy layer in the case of OBC) is found to be false, service will be terminated forthwith without assigning any reason and without prejudice to such further action that may be taken under the Indian Penal Code for production of false certificate. You should also intimate the change, if any, of your religion after appointment, immediately to the Appointing/Administrative Authorities concerned.
- On joining the post, the Officer will be required to take an Oath of Allegiance to the Constitution of India and make a solemn affirmation to that effect.
- 8. If the Officer is already employed, she/he should produce the relieving order from her/his present employer.

- 9. The Officer may also note that under the extant rules of Government of India, no person
 - a. Who has entered into or contracted a marriage with a person having a spouse living; or

b. Who, having a spouse living, has entered into or contracted a marriage with any person,

shall be eligible for appointment to service.

- 10. It may be noted that the Officer will have to undergo training, if required, as per prescribed training programme, which will be intimated after joining. Failure to undergo training may render the Officer liable for extension of probation period.
- 11. You will be governed by Central Civil Services (Conduct) Rules 1964 and Central Civil Services Classification Control and Appeal Rules, 1965 as amended from time to time and as per provision of AIIMS Act.
- 12. Other conditions of service will be as provided under Rules, Bye laws and Regulations of Institute.
- 13. If found ineligible at any stage offer of appointment will be treated as withdrawn and your appointment shall stand terminated with immediate effect.
- 14. Please note that you will be required to conform to Rules, Bye laws, Regulations, discipline and Code of Conduct prevailing in this Institute for its employees from time to time.
- 15. You are advised to apply for allotment of Institute's accommodation within a period of fortnight of your joining in this Institute. However, it will be allotted as per policy of this Institute and subject to availability.
- 16. You will be at disposal of Institute on whole time basis and your services may be utilized in any manner, anywhere in India required by Competent Authority of Institute without claiming any additional remuneration.
- 17. If any of declarations made or information furnished by you are proved to be false or if you are found to have wilfully suppressed any material information you will be liable for removal from Institute 's services besides any other action what Institute may deem necessary.
- 18. No travelling or other allowances will be payable to you for obtaining medical or other certificate or for joining post at institute.
- 19. You will be governed by Pension Scheme as applicable by Rules and Regulations of Institute.
- 20. If offer is acceptable to you on aforesaid conditions, you may please communicate your acceptance to Administrative Officer of institute at following address: All India Institute of Medical Sciences, Rishikesh, Virbhadra Marg, Rishikesh-249203(Uttarakhand) job@aiimsrishikesh.edu.in immediately and also to report yourself for duty as early as possible, but not later than 25.10.2023 In case you do not join post by stipulated date, this offer of appointment will be treated as cancelled/withdrawn.
- 21. Notwithstanding anything contained in this offer letter, you undertake to work with this institute for a minimum period of 2 (two) years against your appointment. Non completion of stipulated term due to any reason will make you liable to pay a sum of Rs. 2 (Two) lakhs as liquidated damages. However, the sum of liquidated damage may be waived off
- (either in full or in part) by Director of institute on exceptional humanitarian ground on case to case basis.
- 22. Please acknowledge receipt of this letter.

Registrar AllMS, Rishikesh

Copy forwarded to:

- 1. DDA/MS/FA/NS/AO, AIIMS, Rishikesh.
- 2. PS to Director
- 3. Guard File
- 4. Personal File

IMG-20240312-WA0013.jpg



अखिल भारतीय आयुर्विज्ञान संस्थान , बिलासपुर हिमाचल प्रदेश -१७४०३७ All India Institute of Medical Sciences, Bilaspur Himachal Pradesh-174037 <u>https://aiimsbilaspur.edu.in</u> esmail - establishment b2 @adresblaspur.eda.in 01978-292575



Dated : .0.1-.02-2.923

AIIMS-BLS(B-II)(04)/23- 4289

То

KANU PRIYA THAKUR, (RANK- 2079), TENZIN THAKUR, R/o V.P.O.- SARAHAN, TEH.- RAMPUR, DISTT.-SHIMLA, SARAHAN BSR, HIMACHAL PRADESH-172102. pankajverma1522@gmail.com, Ph. No.- 7018731993.

Subject:- Offer of a in pay lev

Offer of appointment to the post of Nursing Officer(Group-B) in pay level 7 of pay matrix (Rs. 44,900-1,42,400) in All India Institute of Medical Sciences, Bilaspur Himachal Pradesh.

Consequent upon qualifying NORCET-2022 conducted by AIIMS-Delhi and as per approval of the competent authority of the Institute, I take the privilege to inform you that you are hereby offered the post as mentioned in the subject on the following terms and conditions:-

- The pay scale applicable for the said post will in Pay Matrix (Level-07) plus usual allowances as sanctioned from time to time for the same category of Central Government employees stationed at Bilaspur, Himachal Pradesh as per recommendations of the 7th CPC.
- 2. Your appointment will be temporary and you will be on probation for a period of two years. Your appointment during the probation period can be terminated at any time with one month's notice by either side viz., the appointing authority, or the appointee, without assigning any reason whatsoever. It will be open to the Institute to pay, in lieu of notice, for the period by which the notice falls short of one month. Similarly, if you wish to resign, you may do so by depositing your salary & allowances with the Institute in lieu of the notice in respect of the period by which it falls short of one month and taking permission for the curtailment of notice period. The period of probation can be extended at the discretion of the Competent Authority. During the period of probation, you will be required to undergo Induction Training and also to undertake such other training courses and departmental tests as the Institute may prescribe. At the end of the training, your performance will be evaluated through written examination and successful completion of the training will be mandatory for completion of the probation and subsequent confirmation. Failure to complete the period of probation to the satisfaction of the Institute or failure to pass the prescribed test(s) will render you liable to be discharged from service.
- If you are already in service of Central Government/State Government/ PSU/ Autonomous Body etc., you are required to submit formal Relieving Order by

4. Excellence in Competitive Examination



CENTRAL BOARD OF SECONDARY EDUCATION, DELHI

Central Teacher Eligibility Test (CTET) - JANUARY 2021

			Eligibility	Certificate			
This is to certify that							
Name	EKTA CH	AUHAN					
Roll No.	12001130	2				6	2
Category	GEN						- 1
Mother's Name	BABITA C	HAUHAN					-
Father's/Husband's Name	BRIJMOH	AN CHAUHA	N				7
appeared at Central Teache	r Eligibility T	est conducte	d by Central I	Board of Seconda	ary Education, Delhi and	d performed as	under:-
Paper-I (For Cl	asses I-V) F	rimary Stage	r.	Paper	r-II (For Classes VI-VIII)	Elementary St	age
Subject		Maximum Marks	Marks Obtained		Subject	Maximum Marks	Marks Obtained
Child Development and Ped	agogy	30	29	Child Developm	nent and Pedagogy	30	29
Athematics		30	26	Mathematics &	Science	60	44
Environmental Studies		30	26	(Maths : 25 & S	science : 19)	1447541	
anguage-I English		30	17	Language-I Eng	glish	30	19
anguage-II Hindi		30	24	Language-II Hi	ndi	30	22
otal Marks		150	122	Total Marks		150	114
Result	QUAL	IFIED		Result QUA		ALIFIED	
xamination held on :	31-01-2021			Result declared	d on : 26-02-2021	1	
			DigiLo Verif	ocker fied	Digitally signed by: Authorized Signato Central Board of Sec Date: 23/02/2022 20:	ry condary Educa :39:35 IST	tion
NOTE: 'Marks obtained is app Delhi as per their notification gi	licable only fo ving 5% relax	r recruitment o ation in case of	f teachers in Ke candidates co	endriya Vidyalaya S vered under reserva	angathan and Directorate ation policy.	of Education, Go	vt. of NCT o
1. This certificate is generated	ated by DigiLo	ocker (https://di	gilocker.aov in	directly from CBSE	E's database.		
2. To verify this certificate,	download Di	giLocker Andro	id application f	rom Google Play ar	nd scan the QR code on th	e certificate.	
3. This digitally signed doo	cument is lega	Ily valid as per	the IT Act 200	0 when used electro	onically.		
4. The Validity Period of T	ET qualifying	certificate for a	ppointment, un	less otherwise notil	fied by the appropriate Go	vernment, would i	emain valid
for life. (refer Public Not	tice dated 21/	06/2021 availat	ole on CTET w	ebsite https://ctet.ni	c.in).	in lite contaction of a	and a state of the
6 The eligibility of the cap	didates has n	ot been verified	by the Board	The particulars of t	nt, it is only one of the elig	ect offered by him	/her are as
per the declaration in th	e Application	Form of CTET	The Appointin	a Authority may ver	rify the same before appoint	ntment.	
7. (i) The CTET shall apply	to schools of	the Central Go	overnment (KV	S, NVS, Central Tib	etan Schools, etc.) and Sc	chools under the a	Idministrativ
control of UT's of Chan	digarh, Dadra	& Nagar Havel	i, Daman & Diu	and Andaman & N	licobar Islands and NCT o	f Delhi.	
(ii)CTET may also apply	y to the unaide	ed private Scho	ols, who may e	exercise the option	of considering the CTET.		
(iii)A State Government	can also con	sider the CTET	if it decides no	t to conduct the Sta	ate TET		



appeared at Central Teacher Eligibility Test conducted by Central Board of Secondary Education, Delhi and performed as under

Paper-I (For Classes I-V) Primary Stage			Paper-II (For Classes VI-VIII) Elementary Stage		
Subject	Maximum Marks	Marks Obtained	Subject	Maximum Marks	Marks Obtained
Child Development and Pedagos	ју 30	26	Child Development and Pedagogy	30	24
Mathematics	30	07	Social Science	60	19
Environmental Studies	30	18			
Language-I English	30	19	Language-I English	30	18
Language-II Punjabi	30	20	Language-II Punjabi	30	22
Total Marks	150	090	Total Marks	150	9.4
Result QUALIFIED		Result	NOT QUALIFIED		
Examination held on : 31-01	-2021		Result declared on 26-02-2	2021	

Examination held on : 31-01-2021

DELHI

DATE: 26-02-2021



DigiLocker Verified

Digitally signed by Authorized Signatory Central Board of Secondary Education Date 12/03/2021 21 38 23 IST

NOTE: "Marks obtained is applicable only for recruitment of teachers in Kendriva Vidvalava Sangathan and Directorate of Education. Govt. of NCT of Delhi as per their notification giving 5% relaxation in case of candidates covered under reservation policy

INSTRUCTIONS

1. This certificate is generated by DigiLocker (https://digilocker.gov.in) directly from CBSE's database

2. To verify this certificate, dewnload DigiLocker Android application from Google Play and scan the OR code on the centricate

3. This digitally signed document is legally valid as per the IT Act 2000 when used electronically

4. The validity period of CTET qualifying certificate for all categories will be seven years from the date of declaration of result

5.Qualifying the CTET would not confer a right on any person for recruitment appointment at is only one of the eligibility criteria of appointment at

6. The eligibility of the candidates has not been verified by the Board. The particulars of the candidate and the subject offered by timber are as per the declaration in the Application Form of CTET. The Appointing Authority may verify the same before appointment

7.(i)The CTET shall apply to schools of the Central Government (KVS, NVS, Central Libetan Schools, etc.) and Schools are exercised control of UT's of Chandigarh, Dadra & Nagar Haveli, Daman & Diu and Andaman & Nicobar Islands and NCT of Detro (ii)CTET may also apply to the unaided private Schools, who may exercise the option of considering the CTE1 (iii)A State Government can also consider the CTET if it decides not to conduct the State TET



Central Teacher Eligibility Test (CTET) - JANUARY 2021

BARY	A
Eligipulity	Contitucato
CHEIDHILV	centincate
0	

mis is to certify that		
Name	GURPREET KAUR	
Roll No.	167004605	
Category	OBC	
Mother's Name	RAJWANT KAUR	
Father's/Husband's Name	BALBIR SINGH	S. STERRY

appeared at Central Teacher Eligibility Test conducted by Central Board of Secondary Education, Delhi and performed as under:-

Paper-I (For Classes I-V)	Primary Stage		Paper-II (For Classes VI-VIII)	Elementary St	age
Subject	Maximum Marks	Marks Obtained	Subject	Maximum Marks	Marks Obtained
Child Development and Pedagogy	30	23	Child Development and Pedagogy	30	23
Mathematics	30	15	Social Science	60	26
Environmental Studies	30	19			
Language-I English	30	19	Language-I English	30	13
Language-II Punjabi	30	18	Language-II Punjabi	30	22
Total Marks	150	094	Total Marks	150	084*
Result QUALIFIED			Result QUA	LIFIED	
Examination held on : 31-01-2021	L		Result declared on : 26-02-2021		

DELHI

DATE: 26-02-2021



DigiLocker Verified

Digitally signed by: Authorized Signatory Central Board of Secondary Education Date: 10/03/2021 21:27:33 IST



INSTRUCTIONS

1. This certificate is generated by DigiLocker (https://digilocker.gov.in) directly from CBSE's database.

2. To verify this certificate, download DigiLocker Android application from Google Play and scan the QR code on the certificate.

3. This digitally signed document is legally valid as per the IT Act 2000 when used electronically.

4. The validity period of CTET qualifying certificate for all categories will be seven years from the date of declaration of result.

- 5. Qualifying the CTET would not confer a right on any person for recruitment/appointment; it is only one of the eligibility criteria of appointment.
- 6. The eligibility of the candidates has not been verified by the Board. The particulars of the candidate and the subject offered by him/her are as per the declaration in the Application Form of CTET. The Appointing Authority may verify the same before appointment.

7.(i) The CTET shall apply to schools of the Central Government (KVS, NVS, Central Tibetan Schools, etc.) and Schools under the administrative control of UT's of Chandigarh, Dadra & Nagar Haveli, Daman & Diu and Andaman & Nicobar Islands and NCT of Delhi.

(ii)CTET may also apply to the unaided private Schools, who may exercise the option of considering the CTET.

(iii)A State Government can also consider the CTET if it decides not to conduct the State TET.



Central Teacher Eligibility Test (CTET) - JANUARY 2021

MARKS STATEMEN

Serial No. J211670510555 Roll No. 167004864 Candidate's Name CHARANJIT KAUR Mother's Name PARAMJIT KAUR Father's/Husband's Name TAHIL SINGH Gender Female Date of Birth 17/04/1994 Category SC If Differently Abled No





Signature of the Candidate

Paper-I (For Classes I-V) Primary Stage		Paper-II (For Classes VI-VIII) Elementary St	age
Subject	Maximum Marks	Marks Obtained	Subject	Maximum Marks	Marks Obtained
Child Development and Pedagogy	30	25	Child Development and Pedagogy	30	23
Mathematics	30	10	Social Science	60	20
Environmental Studies	30	17			
Language-I Punjabi	30	18	Language-I Punjabi	30	22
Language-II English	30	16	Language-II English	30	13
Total Marks	150	086	Total Marks	150	078
Language-II English Total Marks	30 150	16 086	Language-II English Total Marks	30 150	13 078

DELHI

DATE: 26-02-2021





Digitally signed by: Authorized Signatory Central Board of Secondary Education Date: 23/03/2022 17:28:04 IST

Applicable only for recruitment of teachers in Kendriya Vidyalaya Sangathan and Directorate of Education, Govt of NCT of Delhi.

- 1. This mark sheet is generated by DigiLocker (https://digilocker.gov.in) directly from CBSE's database.
- 2. To verify this mark sheet, download Digit.ocker Android application from Google Play and scan the QR code on the mark sheet.
- 3. This digitally signed document is legally valid as per the IT Act 2000 when used electronically.
- 4.The Validity Period of TET qualifying certificate for appointment, unless otherwise notified by the appropriate Government, would remain valid for life. (refer Public Notice dated 21/06/2021 available on CTET website https://ctet.nic.in.).
- 5.Candidates securing 60% and above marks will be considered as CTET qualified. School managements (Government, Local Bodies, Government aided and un-aided) may consider giving concessions to persons belonging to SC/ST, OBC, Differently Abied etc. categories in accordance with their extant reservation policy.
- 8. Qualifying the CTET would not confer a right on any person for recruitment/appointment as it is only one of the eligibility criteria for appointment
- 7. The marks statement is issued provisionally to the candidates as per the information provided by him/her. The eligibility of the candidate has no been verified by the Board. The eligibility shall be finally verified by the concerned recruiting agency/appointing authority.
- 8. Furnishing of false, wrong or inaccurate information by the candidate may lead to cancellation of the CTET result.
- 9. There is no restriction on the number of attempts a person can take for acquiring a CTET Certificate.



Central Teacher Eligibility Test (CTET) - DECEMBER 2018

Eligibility Certificate

This	S	to	certify	tha:
------	---	----	---------	------

HARJINDER KAUR
57020927
GEN
SATIBIR KAUR
SUKHDEV SINGH



appeared at Central Teacher Eligibility Test conducted by Central Board of Secondary Education, Delhi and performed as under-

Paper-I (For Classes I-V) Primary Stage		Paper-II (For Classes VI-VI	II) Elementary St	age
Subject	Maximum Marks	Marks Obtained	Subject	Maximum Marks	Marks
Child Development and Pedagogy	30	24	Child Development and Pedagogy	30	13
Mathematics	30	17	Mathematics & Science	60	41
Environmental Studies	30	21	(Maths: 24 & Science : 17)		
Language-I English	30	16	Language-I English	30	16
Language-II Punjabi	30	26	Language-II Punjabi	30	20
Total Marks	150	104	Total Marks	150	000
Result QI	JALIFIED		Result OI	IALIFIED	080
Examination held on 09-12-2018		Result declared on 04.01.20	10		
DELHI			0001-20		

DATE : 04-01-2019



NOTE: Marks obtained is applicable only for recruitment of teachers in Kendriya Vidyalaya Sangathan and Directorate of Education, Govt. of NCT of Dethi as per their notification giving 5% relaxation in case of candidates covered under reservation policy.

- 1 This certificate is generated by DigiLocker (https://digilocker.gov.n) directly from CBSE's database.
- 2 To verify this certificate, download DigiLocker Android application from Google Play and scan the OR code on the certificate.
- 3. This digitally signed document is legally valid as per the IT Act 2000 when used electronically.
- 4. The validity period of CTET qualifying certificate for all categories will be seven years from the date of declaration of result.
- 5. Qualifying the CTET would not confer a right on any person for recruitment/appointment, it is only one of the eligibility criteria of appointment.
- 6. The eligibility of the candidates has not been venfied by the Board. The particulars of the candidate and the subject offered by him/her are as per the declaration in the Application Form of CTET. The Appointing Authority may verify the same before appointment.
- 7 (ii)The CTET shall apply to schools of the Central Government (KVS, NVS, Central Tibetan Schools, etc.) and Schools under the administrative control of UT's of Chandigerh, Dedra & Nagar Haveli, Deman & Diu and Andaman & Nicobar Islands and NCT of Delhi.
- (ii)CTET may also apply to the unaided private Schools, who may exercise the option of considering the CTET.
- (a)A State Government can also consider the CTET if it decides not to conduct the State TET.



BSIGBCDOFS CENTRAL BOARD OF SECONDARY EDUCATION, DELHI

Central Teacher Eligibility Test (CTET) - DECEMBER 2018

Eligibility Certificate

This is to certify that		And the other Designer and the other
Name	SATWINDER KAUR	
Roll No.	08018815	
Category	SC	1 Jack
Mother's Name	GURPREET KAUR	1 ==
Father's Husband's Name	PARGAT SINGH	

appeared at Central Teacher Eligibility Test conducted by Central Board of Secondary Education, Delhi and performed as under:-

Paper-I (For Classes I-V) Primary Stage				Paper-II (For Classes VI-VIII) Elementary Stage			
Subject		Maximum	Marks Obtained	Subject	Maximum Marks	Marks Obtained	
Child Davelooment and Periabooty		30	27	Child Development and Peda	agogy 30	20	
Mathematics Environmental Studies		30	20	Social Science 60		41	
		30	17				
Language-I English		30	18	Language-I English	30	15	
Lancuage-II Puniabi		30	25	Language-II Punjabi	30	23	
Total Marks		150	107	Total Marks	150	099	
Result	esult QUALIFIED		Result	QUALIFIED			
Examination held on 09-12-2018		Result declared on : 0	04-01-2019				

DELHI

DATE: 04-01-2019





Digitally signed by: Authorized Signatory Central Board of Secondary Education Date: 07/02/2019 15:23:20 IST

NOTE: Marks obtained is applicable only for recruitment of teachers in Kendriya Vidyalaya Sangathan and Directorate of Education, Govt. of NCT of Delhi as per their notification giving 5% relaxation in case of candidates covered under reservation policy.

- 1. This certificate is generated by DigiLocker (https://digilocker.gov.in) directly from CBSE's database.
- 2. To varify this certificate, download DigiLocker Android application from Google Play and scan the QR code on the certificate.
- 3. This digitally signed document is legally valid as per the IT Act 2000 when used electronically.
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- 5. Qualifying the CTET would not confer a right on any person for recruitment/appointment; it is only one of the eligibility onteria of appointment.
- 6. The eligibility of the candidates has not been venfied by the Board. The particulars of the candidate and the subject offered by him/her are as per the declaration in the Application Form of CTET. The Appointing Authority may verify the same before appointment.
- 7.(i)The CTET shall apply to schools of the Central Government (KVS, NVS, Central Tibetan Schools, etc.) and Schools under the administrative control of UT's of Chandigarh, Dadra & Nagar Haveli, Daman & Diu and Andaman & Nicobar Islands and NCT of Deihi.
- (ii)CTET may also apply to the unaided private Schools, who may exercise the option of considering the CTET.
- (iii)A State Government can also consider the CTET if it decides not to conduct the State TET.



Central Teacher Eligibility Test (CTET) - JULY 2019

Eligibility Certificate

This is to certify that	
Name	MANDEEP KAUR
Roll No	108010104
Category	SC
Mother's Name	CHARANJEET KAUR
Father's/Husband's Name	SADHU SINGH



appeared at Central Teacher Eligibility Test conducted by Central Board of Secondary Education, Delhi and performed as under-

Paper-I (For Classes I-V) Primary Stage				Paper-II (For Classes VI-VIII) Elementary Stage			
Subject		Maximum Marks	Marks Obtained	Subject	t	Maximum Marks	Marks Obtaine
Child Development and	Pedagogy	30	NA	Child Development and	Pedagogy	30	25
Mathematics		30	NA	Social Science		60	25
Environmental Studies		30	NA				
Language-I		30	NA	Language-I English		30	16
Language-II		30	NA	Language-II Punjabi		30	24
Total Marks		150	NA	Total Marks		150	090
Result	NOT A	PLICABLE		Result	QUAL	IFIED	
Examination held on :	07-07-2019			Result declared on :	30-07-2019		

DELHI

DATE: 30-07-2019





Digitally signed by: Authorized Signatory Central Board of Secondary Education Date: 22/10/2020 13:49:33 IST

NOTE: Marks optained is applicable only for recruitment of teachers in Kendriya Vidyalaya Sangathan and Directorate of Education, Govt. of NCT of Delhi as per their notification giving 5% relaxation in case of candidates covered under reservation policy.

- 1. This certificate is generated by DigiLocker (https://digilocker.gov.in) directly from CBSE's database.
- 2. To verify this cartificate, download DigiLocker Android application from Google Play and scan the QR code on the certificate.
- 3 This digitally signed document is legally valid as per the IT Act 2000 when used electronically
- 4 The validity period of CTET qualifying certificate for all categories will be seven years from the date of declaration of result.
- 5. Qualifying the CTET would not confer a right on any person for recruitment/appointment; it is only one of the eligibility criteria of appointment.
- 5. The eligibility of the candidates has not been verified by the Board. The particulars of the candidate and the subject offered by him/her are as per the declaration in the Application Form of CTET. The Appointing Authority may verify the same before appointment.
- 7. 6)The CTET shall apply to schools of the Central Government (KVS, NVS, Central Tibetan Schools, etc.) and Schools under the administrativ control of UT's of Chandigarh, Dadra & Nagar Haveli, Damari & Diu and Andaman & Nicobar Islands and NCT of Delhi.
- SUCTET may also apply to the unaided private Schools, who may exercise the option of considering the CTET.
- (iii)A State Government can also consider the CTET if it decides not to conduct the State TET,

Central Teacher Eligibility Test (CTET) - DECEMBER 2019

Eligibility Certificate

that is to cuttiny that	
Name	DAISY
Roll No	169005935
Category	OBC
Mother's Name	ASHA RANI
Father's/Husband's Name	MANOHAR LA



appeared at Central Teacher Eligibility Test conducted by Central Board of Secondary Education, Delhi and performed as under-

Paper-I (For Gasses I-V) Primary Stage				Paper-II (For Classes VI-VIII) Elementary Stage			
Subject		Maximum Marks	Marks Obtained	Subject		Maximum Marks	Marks Obtained
Child Development and	Pedagogy	30	NA	Child Development and	Pedagogy	30	25
Mathematics		30	NA	Social Science		60	30
Environmental Studies		30	NA				
Language-I		30	NA	Language-I Hindi		30	23
Language-II		30	NA	Language-II Punjabi		30	24
Total Marks		150	NA	Total Marks		150	102
Result	NOT	APPLICABLE		Result	QUAL	IFIED	
Examination held on .	08-12-2019			Result declared on :	27-12-2019		
DELHI							

DATE: 27-12-2019





Digitally signed by: Authorized Signatory Central Board of Secondary Education Date: 26/09/2020 09:02:56 IST

NOTE: Marks utcained is applicable only for recruitment of teachers in Kendriya Vidyalaya Sangathan and Directorate of Education, Govt, of NCT of Detry as per their notification giving 5% relaxation in case of candidates covered under reservation policy.

INSTRUCTIONS

1. This cendicate is generated by DigiLocker (https://digilocker.gov.in) directly from CBSE's database.

2 To vority this contribute download DigiLocker Android application from Google Play and scan the QR code on the certificate.

3. This digitally signed document is legally valid as per the IT Act 2000 when used electronically.

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5. Qualitying the CTET would not confer a right on any person for recruitment/appointment; it is only one of the eligibility citeria of appointment.

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(ii)CTET may also apply to the unasted private Schools, who may exercise the option of considering the CTET.

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Country of Nationality	INDIA				
First Language	PUNJABI				
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5. Coaching Classes for advanced learners

Coaching Classes for EU Students

This is for the information for all that the University has established coaching center within the campus for those aspiring to appear for UGC NET/ CSIR/Others examination, For UPSC and other screening exams for Government Jobs and IELTS for those aspiring to go abroad

The selected eminent faculty members of various departments will take the classes of coaching.

KINDLY CONTACT

Prof S Gill, CS Department for IELTS activities.

For other activities kindly contact Prof Anil Kumar

Upcoming Activity:

• NET classes for Mathematical Sciences will be start from Sept. 10, 2022 (Saturday)

Coordinator:

Dr. Anil Kumar Gupta

Mob.No.9340948649

Email Address:- anilkumargupta@eternaluniversity.edu.in

Date: 16/09/2022

Coaching Classes for EU Students

Schedule of October-2022

-	Sr.No.	Date & Time	Topic	Expert Name
	*Lec-04	01/10/22 & 10:00 AM onwards	Partial Differential Equations and its various aspects	Dr. Neeraj Kumar Tripathi Assistant Professor Department of Applied Sciences and Humanities, National Institute of Advanced Manufacturing Technology, Ranchi JH
	*Lec-05	08/10/22 & 10:00 AM onwards	Polynomials and its splitting field	Dr. Pankaj Pandey Assistant Professor Department of Mathematics, Lovely Professional University Phagwara PB

Venue- Lecture Hall-307

* Lecture will be delivered online mode.

Coordinator:

And Du

Dr. Anil Kumar Gupta

Mob.No.9340948649

Email Address:-anilkumargupta@eternaluniversity_edu.in



Lecture to motivate UG Agriculture students for PG Admission Test

On **19th April**, **2022** Prof. S.K. Chauhan (Dean, ACECM) talked with the students of B. Com (Hons.) 2nd and 3rd year regarding the NEAT Exam.









6. Research Publications

Current Research in Food Science 4 (2021) 917-925





Effect of soaking and germination treatments on nutritional, anti-nutritional, and bioactive properties of amaranth (Amaranthus hypochondriacus L.), quinoa (Chenopodium quinoa L.), and buckwheat (Fagopyrum esculentum L.)

Priyanka Thakur^a, Krishan Kumar^{a,*}, Naseer Ahmed^a, Divya Chauhan^a, Qurat Ul Eain Hyder Rizvi^a, Sumaira Jan^a, Tajendra Pal Singh^a, Harcharan Singh Dhaliwal^b

^a Department of Food Technology, Dr. Khem Singh Gill Akal College of Agriculture, Eternal University, Baru Sahib, Sirmour, HP, 173101, India ^b Department of Biotechnology, Dr. Khem Singh Gill Akal College of Agriculture, Eternal University, Baru Sahib, Sirmour, HP, 173101, India

ABSTRACT

ARTICLEINFO

Keywords: Pseudocereals Germination Soaking Anti-nutrients Antioxidant activity Phenolic components Pseudocereals have attracted the attention of nutritionists and food technologists due to their high nutritional value. In addition to their richness in nutritional and bioactive components, these are deficient in gluten and can serve as valuable food for persons suffering from gluten allergies. Processing treatments are considered an effective way to enhance the quality of food grains. Soaking and germination are traditional and most effective treatments for enhancing the nutritional and bioactive potential as well as reducing the anti-nutritional components in food grains. This study reflects the effect of soaking and germination treatment on nutritional, bioactive, and anti-nutritional characteristics of pseudocereals. There was a significant ($p \le 0.05$) increase in nutritional and bioactive components such as crude fiber, crude protein, phenolic components, antioxidant activity, and mineral content but reduced the anti-nutrients such as tannin and phytic acid. In amaranth, there was a significant increase ($p \le 0.05$) of 7.01, 74.67, 126.62, and 87.47% in crude protein, crude fiber, phenolic content, and antioxidant activity but significant (p ≤ 0.05) reduction of 32.30% and 29.57% in tannin and phytic acid contents, respectively. Similar changes in values of crude proteins, crude fiber, phenolic content, and antioxidant activity were observed in buckwheat and quinoa. While the anti-nutritional components such as tannin and phytic acid decreased by 59.91 and 17.42%, in buckwheat and 27.08% and 47.57%, in quinoa, respectively. Therefore, soaking and germination proved to be excellent techniques to minimize the antinutritional component and enhance the nutritional, bioactive, and antioxidant potential of these underutilized grains.

1. Introduction

Pseudocereals are dicotyledonous gluten-free grains and are considered as a substitute to true cereals. Amaranth (Amaranthus hypochondriacus; family Amaranthaceae), buckwheat (Fagopyrum esculentum; family Polygonaceae), and quinoa (Chenopodium quinoa sub sp. quinoa; family Chenopodiaceae) are well-known pseudocereals used expansively worldwide. Due to their high starch content, pseudocereals can be used like other cereals for the preparation of value-added food products (Li and Zhang, 2001; Thakur et al., 2021). Recently, pseudocereals have gained wide popularity among consumers because of their good quality proteins and their appropriateness for celiac patients. Moreover, these are also rich in dietary fiber and phenolic components, which are connected with their wide health benefits. Reports from various studies have shown that the flour of pseudocereals can be replaced with that of cereal for the preparation of functional and gluten-free food products ar and de Carvalho Oliveira, 2019). (Alenca

Despite being highly nutritious, these grains have limited bioavailability owing to the presence of anti-nutritional components such as tannins and phytic acid that bind with nutrients making them

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E-mail address: krishankumar02007@gmail.com (K. Kumar).





RESEARCH ARTICLE

Effect of processing treatments on nutritional, anti-nutritional and bioactive characteristics of horse gram (*Macrotyloma uniflorum* L.)

Qurat UI Eain Hyder Rizvi¹, Krishan Kumar¹⁺, Naseer Ahmed¹, Divya Chauhan¹, Priyanka Thakur¹, Sumaira Jan¹, Imran Sheikh²

¹Department of Food Technology, Dr. Khem Singh Gill Akal College of Agriculture, Eternal University, Baru Sahib, Sirmour, HP-173101, India

²Department of Biotechnology, Dr. Khem Singh Gill Akal College of Agriculture, Eternal University, Baru Sahib, Sirmour, HP-173101, India

Received: 09.02.2022 Accepted: 11.04.2022

ABSTRACT

Horse gram (*Macrotyloma uniflorum* L.) is an important and one of the most nutritious crops that can be utilized as a basic ingredient for the preparation of several foods because of Its high nutritional value. Cereal sprouts are supposed to have a better nutritional profile than cereal grains and their products. The present study aimed to explore the changes occurring during the processing treatments such as soaking and germination of horse gram seeds. The effect of processing treatments on nutritional, anti-nutritional, minerals (Fe, Zn, Mn, and Cu), and bioactive components of horse gram was studied at an interval of 12 and 24 h during soaking and 24, 48, and 72 h during the germination treatments. The results revealed that there was a 20.66 and 23.01% rise in protein content during soaking and germination treatments, respectively. The phenolic components were enhanced to 28.49% and antioxidant activity increased by 31.51% respectively after soaking and germination treatments. The anti-nutritional components like phytic acid, trypsin inhibitor, and tannin contents decreased significantly ($p\leq0.05$) to 40.50, 28.57, and 26.79%, respectively after soaking and germination processing treatments.

Keywords: Anti-nutrients, bioactive components, germination, horse gram, soaking

Citation: Rizvi, Q.E.H., Kumar, K., Ahmed, N., Chauhan, D., Thakur, P., Jan, S., and Sheikh, I. 2022. Effect of processing treatments on nutritional, anti-nutritional, and bioactive characteristics of horse gram (*Macrotyloma uniflorum* L.). Journal of Postharvest Technology, 10(2): 48-59.

INTRODUCTION

India is considered as the top producer and consumer of pulses in the world. Pulses should be incorporated into the diet as it is an important source of protein for vegetarian people. Underutilized pulses are a valuable food source with numerous nutritional and health benefits for consumers and contribute effectively to global and regional food security. Among various

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ISSN: 2348-4330



Impact of soaking, germination, fermentation, and roasting treatments on nutritional, anti-nutritional, and bioactive composition of black soybean (*Glycine max* L.)

Divya Chauhan¹, Krishan Kumar¹*, Naseer Ahmed¹, Priyanka Thakur¹, Qurat Ul Eain Hyder Rizvi¹, Sumaira Jan¹, Ajar Nath Yadav²

¹Department of Food Technology, Dr. Khem Singh Gill Akal College of Agriculture, Eternal University, Baru Sahib, Himachal Pradesh, India. ²Department of Biotechnology, Dr. Khem Singh Gill Akal College of Agriculture, Eternal University, Baru Sahib, Himachal Pradesh, India.

ARTICLE INFO

Article history: Received on: February 11, 2022 Accepted on: March 30, 2022 Available online: July 20, 2022

Key words: Anti-nutrients, Black soybean, Fermentation, Germination, Roasting.

ABSTRACT

Legumes are plants of the family Leguminosae with seed pods that split into two halves. Black soybean seed coat contains numerous bioactive compounds having radical scavenging, anti-tumor, and anti-careinogenic activities. This study was aimed to assess the effect of soaking, germination, natural fermentation, and roasting on nutritional and anti-nutritional components, minerals (Fe Zn, Mn, and Cu), and bioactive components of the black soybean. The effect of soaking was studied at 12 and 24 h while that of germination at 24, 48, and 72 h. The results revealed that the phenolic contents augmented significantly ($P \le 0.05$) in germination, fementation, and roasting by 11.49%, 896%, 2.95%. Further, there was an 11.84% and 22.13% increase in the protein contents during the germination and fermentation processes, respectively. The antiovitant activity of processed grains increased significantly ($P \le 0.05$) during germination, fementation, and roasting by 72.51, 10.14, and 9.64%, respectively. The anti-nutritional compounds such as phytic acid and tamin contents decreased significantly ($P \le 0.05$) during processing treatments. Phytic acid decreased to the extent of 34.04, 51.06, and 13.47% and tamin contents as 47.22, 75, and 38.89%, after germination, fementation, and roasting processes, respectively. A significant ($P \le 0.05$) increase in mineral contents was observed after the germination, and roasting of the black soybean.

1. INTRODUCTION

There is great importance of pulses in human nutrition as these provide a sufficient amount of proteins, calories, vitamins, minerals, and other bioactive components [1]. The popularity of soybean is growing at faster rate as these are rich sources of micronutrients such as Fe, Zn, and Ca and have low glycemic index. The production of soybean showed increasing trend from 454.50 kg/ha in 1961 to 927.80 kg/ha in 2020 in India. The overall production of soybean in world was 385.85 million metric tonnes during 2019–2020 [2]. Besides nutraceutical components, seed comprises numerous essential isoflavones, namely, daidzein and genistein having medicinal properties [3]. The soybean seed coat is rich in several bioactive components having radical scavenging, anti-tumor, and anti-carcinogenic activity [4]. It is nutritionally rich and comprises higher contents of carbohydrates (30%), proteins (32.1–39.8%), fats (10.8–19.6%), dietary fibers (21.77–30.31%), and minerals (3.93–6.15%) including phosphorous, iron, potassium, sodium, zinc, copper, and manganese. Besides, higher content of vitamin B comprising vitamin B1, B2, B3, B5, and B6 is present in different cultivars of soybean [5].

Black soybean (*Glycine max* L. Merrill) has recently received considerable attention due to its high nutritional value and availability as an ingredient in various foods and folk medicines in Asia. Out of the supposed medicinal components in black soybean, the common chemical components are anthocyanins [6], isoflavones such as phytoestrogens [7], oligosaccharides, and saponins [7]. Soybean contains anti-nutritional factors such as tannin and phytic acid. These anti-nutritional factors, especially phytates, are powerful chelating agents that reduce the bioavailability of divalent cations such as zinc, iron, and calcium by the formation of insoluble phytates [8].

Traditional processing treatments such as soaking, fermenting, germinating, and roasting have been utilized for improving the nutritional value of cereals and pulses [9]. The germination process is widely used in cereals and legumes for increasing the nutritive value mainly through the breakdown of anti-nutritional components [10]. Processing techniques responsible for decreasing the anti-nutritional factors as well as minimizing the losses of micronutrients are of great interest to scientists. The thermal, as well as biological processing

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RESEARCH ARTICLE

Effect of processing treatments on nutritional, anti-nutritional and bioactive characteristics of horse gram (*Macrotyloma uniflorum* L.)

Qurat UI Eain Hyder Rizvi¹, Krishan Kumar¹⁺, Naseer Ahmed¹, Divya Chauhan¹, Priyanka Thakur¹, Sumaira Jan¹, Imran Sheikh²

¹Department of Food Technology, Dr. Khem Singh Gill Akal College of Agriculture, Eternal University, Baru Sahib, Sirmour, HP-173101, India

²Department of Biotechnology, Dr. Khem Singh Gill Akal College of Agriculture, Eternal University, Baru Sahib, Sirmour, HP-173101, India

Received: 09.02.2022 Accepted: 11.04.2022

ABSTRACT

Horse gram (*Macrotyloma uniflorum* L.) is an important and one of the most nutritious crops that can be utilized as a basic ingredient for the preparation of several foods because of its high nutritional value. Cereal sprouts are supposed to have a better nutritional profile than cereal grains and their products. The present study aimed to explore the changes occurring during the processing treatments such as soaking and germination of horse gram seeds. The effect of processing treatments on nutritional, nutri-nutritional, minerals (Fe, Zn, Mn, and Cu), and bioactive components of horse gram was studied at an interval of 12 and 24 h during soaking and 24, 48, and 72 h during the germination treatment. The results revealed that there was a 20.66 and 23.01% rise in protein content during soaking and germination treatments, respectively. The phenolic components were enhanced to 28.49% and antioxidant activity increased by 31.51% respectively after soaking and germination treatments. The anti-nutritional components like phytic acid, trypsin inhibitor, and tannin contents decreased significantly ($p \le 0.05$) to 40.50, 28.57, and 26.79%, respectively after 72 h of germination. The mineral contents of horse gram increased significantly after soaking and germination processing treatments.

Keywords: Anti-nutrients, bioactive components, germination, horse gram, soaking

Citation: Rizvi, Q.E.H., Kumar, K., Ahmed, N., Chauhan, D., Thakur, P., Jan, S., and Sheikh, I. 2022. Effect of processing treatments on nutritional, anti-nutritional, and bioactive characteristics of horse gram (*Macrotyloma uniflorum* L.). Journal of Postharvest Technology, 10(2): 48-59.

INTRODUCTION

India is considered as the top producer and consumer of pulses in the world. Pulses should be incorporated into the diet as it is an important source of protein for vegetarian people. Underutilized pulses are a valuable food source with numerous nutritional and health benefits for consumers and contribute effectively to global and regional food security. Among various

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ISSN: 2348-4330



Influence of soaking and germination treatments on the nutritional, anti-nutritional, and bioactive composition of pigeon pea (*Cajanus cajan* L.)

Qurat Ul Eain Hyder Rizvi¹, Krishan Kumar¹*, Naseer Ahmed¹, Ajar Nath Yadav², Divya Chauhan¹, Priyanka Thakur¹, Sumaira Jan¹, Imran Sheikh²

¹Department of Food Technology, Dr. Khem Singh Gill Akal College of Agriculture, Eternal University, Sirmour, Himachal Pradesh, India ²Department of Biotechnology, Dr. Khem Singh Gill Akal College of Agriculture, Eternal University, Sirmour, Himachal Pradesh, India.

ARTICLE INFO

Article history: Received on: November 23, 2021 Accepted on: February 08, 2022 Available online: April 10, 2022

Key words: Anti-nutrients, Antioxidant activity, Germination, Pigeon pea, Soaking.

ABSTRACT

Pigeon pea (*Cajanus cajan* L.) is an important perennial pulse from the family Fabaceae. It is one of the important underthlized pulses having high nutritional value and can be used as a basic ingredient for the preparation of value-added food products. The present investigation aimed to study the influence of soaking and germination on nutritional and anti-mutritional components, minerals (Fe, Zn, Mn, and Cu), and bioactive components of pigeon pea grains. The effect of soaking was studied at 12 and 24 h while that of germination at 24, 48, and 72 h. The results revealed that there was a 6 34% and 15.41% increase in protein contents during soaking and germination treatments, respectively. A significant ($P \le 0.05$) increase in reducing power (91.46%) and metal chelating activity (64.16%) was observed in germination, respectively, but the anti-nutritional components like tannin contents and 76.15% and 30.5%, respectively after 72 h of germination. A significant ($P \le 0.05$) increase in mineral so grains and antioxiting increases of pigeon pea grains. Therefore the soaking and germination processing of pigeon pea grains. Therefore the soaking and germination processing of pigeon pea grains. Therefore the soaking and germination processing of pigeon pea grains.

1. INTRODUCTION

Pulses are the potential sources of vegetable proteins in the human diet. India is the world's leading producer of pulses. It is cultivated in several parts of the world and does not require much water as it is considered a drought-resistant crop. These have a protein level of 20–25% by weight, which is twice that of wheat and three times that of rice. Pigeon pea (*Cajanus cajan* L.) is extensively utilized in the form of a pulse and is considered an inexpensive source of proteins. Besides, it is a vital source of nutraceutical and bioactive components. The bioactive components of pigeon pea were examined for their role in increasing the anti-carcinogenic and antioxidant effects, as well as these, have been reported to play a crucial role in modulating the gut microbiota [1]. It is a great source of B-complex vitamins, carbohydrates, and minerals. Pigeon pea when supplemented with other creals provides a well-balanced diet with all essential amino acids and is equivalent to other protein-rich sources such as soybean

Krishan Kumar,

Department of Food Technology, Dr. Khem Singh Gill Akal College of Agriculture, Eternal University, Sirmour, Himachal Pradesh, India. E-mail: krishankumar02007@gmail.com and whey [2]. Due to the existence of various flavonoids and polyphenolic compounds in pigeon pea, it has several nutraceutical characteristics in addition to its high nutritional value. Several studies have shown that consuming pigeon pea reduces the risk of various lifestyle diseases such as diabetes, obesity, cancer, and cardiovascular disorders [3]. Pigeon pea is a dense source of nutrients, but some antinutrients such as phytic acid, tannins, and trypsin inhibitors bind with its nutritional elements making them unavailable to our body. Phytic acid binds with dietary minerals, such as iron, calcium, zinc, etc., tannins bind with proteins preventing their absorption, and trypsin inhibitors bind with the enzyme trypsin, thereby reducing its biological activity. Soaking is a conventional method used for hydrating the grains in the water [4] and proved useful for the reduction as well as the elimination of the anti-nutrients existing in the food grains [5]. It has been reported from various studies that soaking of food grains for 12-18 h is the best effective processing treatment to decrease the level of anti-nutrients such as trypsin inhibitors, phytic acid, etc. which are wholly or partially soluble in water [4,6]. Germination is a commonly used conventional technique that enhances the digestibility of nutrients, improves bioactive components, and reduces some antinutritional components in pulses. It also enhances the concentration of bioactive compounds such as total phenolic components, reducing

^{*}Corresponding Author:

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ISSN: 2347-467X, Vol. 10, No. (1) 2022, Pg. 171-182

Current Research in Nutrition and Food Science

www.foodandnutritionjournal.org

Effect of Processing Treatments on the Nutritional, Anti-Nutritional, and Bioactive Composition of Blue Maize (Zea Mays L.)

DIVYA CHAUHAN¹, KRISHAN KUMAR¹, NASEER AHMED¹, TAJENDRA PAL SINGH¹, PRIYANKA THAKUR¹, QURAT-UL-EAIN HYDER RIZVI¹, AJAR NATH YADAV², and HARCHARAN SINGH DHALIWAL²

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Abstract

Maize is considered as an important annual cereal crop cultivated widely throughout the world. Blue Maize (Zea mays L.) is a blue-colored variety of maize containing high content of anthocyanin and belongs to the family Poaceae. The current study aimed to evaluate the effect of soaking, germination, natural fermentation, and roasting on nutritional, anti-nutritional, and bioactive components of blue maize. The changes in chemical composition were studied after 12 and 24 h of soaking and 24, 48, and 72 h of germination treatment. The blue maize grains were subjected to natural fermentation for time intervals of 12, 24, and 36 h, and roasting treatment by heating at 180 °C on a hot plate for 10 s. The results revealed that the phenolic content increased significantly (p≤0.05) from 44.88 to 51.56 mg GAE/100g after 36 h fermentation and from 44.88 to 61.05 mg GAE/100g after 72 h of germination whereas it decreased from 44.88 to 35.73 mg GAE/100g during the roasting process. Further, there was a 44.02 and 20.22% increase in protein content during germination and fermentation processes, respectively, and a slight decrease of 2.16% after roasting treatment. The antioxidant activity increased significantly (p≤0.05) from 10.41 to 18.85% during germination and 10.41 to 14.50% during fermentation, respectively. But it was found to get decreased by 6.53% after the roasting process. The anti-nutrients such as phytic acid and tannins declined significantly (p≤0.05) during the processing treatments.



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Keywords

Anthocyanin; Antioxidant Activity; Anti-Nutrients; Blue Maize; Fermentation; Germination; Roasting.

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An Ecocritical Study of Anita Desai's Novel Fire on the Mountain

By

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Abstract

Ecocritical analysis of Fire on the Mountain by Anita Desai has posed a tremendous threat to human society as well as the mother planet. The extensive overuse of natural resources has left us on the verge of economic failure. The rainforests are being cut down, fossil fuels are rapidly depleting, the seasonal cycle is disrupted, ecological disasters are occurring on a regular basis around the world, and our environment is on the verge of collapse. Ecocriticism is a worldwide growing movement that came into being as a reaction to man's anthropocentric mindset of dominating nature. The present paper tries to analyse the ecocritical ideas as perceived in some chosen world literature as well as Indian writing in English. An environmentally focused study of literature brings about ecological literacy among the readers, who in the process become eco-conscious, thereby taking excellent care of Mother Nature. Environmental concern is one of the key concerns, and ecocriticism has witnessed rapid development throughout its brief stay since its start. It is an interpretive instrument for interpreting nature writing, which is usually connected with environmental critique, animal studies, green cultural studies, ecosophy, deep ecology, ecofeminism, and eco-spiritualism, etc.

Keywords: Nature, Literature, Ecocriticism, Environment, Fire on the Mountain.

Introduction

The modern globe is confronting eco-disasters, and now our ecology is in danger. Just knowledge and technology are not enough to address the worldwide ecological issue. Ecocriticism is one of the younger revisionist movements that has removed the humanities over the past few decades. We should make a shift in our attitude towards nature. Literature does not float above life, so it has a function to perform. Ecologically oriented literature argues for a greater knowledge of nature in its broader relevance because, for a long time, literary critics did not give nature the consideration it deserved. Within the previous three decades, ecocriticism has emerged as a worldwide emergent movement. The word 'eco' derives from the Greek root word 'oikos, which etymologically means household or earth, and 'logy, from 'logos, denotes logical discourse. Together, they refer to criticism of the home and surroundings as they are represented in literature. Ecocriticism, which was synonymous with American nature writings as well as British Romantic literature, has now acquired its impetus with worldwide

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EVINCEMENT OF PERSECUTION ON THE NAME OF RELIGION IN TASLIMA NASREEN'S LAJJA

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Abstract

Taslima Nasrin, a prominent Bangladeshi author, emerged as a powerful advocate for the victims of riots. She became the voice for those who suffered silently, enduring exploitation and enduring pain at the hands of their fellow countrymen in the name of religion. This courageous step propelled her to international fame and recognition. She stood as a formidable and resilient woman, fighting for her own rights when religious fundamentalists issued a fatwa against her for speaking out in support of the oppressed through her work, *Lajja*. Under the fatwa, she faced a death sentence. Through her novel, she vividly depicted the brutality inflicted by Muslims and Hindus who, in the blink of an eye, turned into enemies due to religious conflicts in India, triggered by the demolition of the Babri Masjid in Ayodhya on December 6, 1992. Riots erupted in India, and the flames of this unrest also spread to Bangladesh, a predominantly Muslim-majority nation.

Key words: Religion, politics, discrimination, domination and oppression.

Persecution on the name of religion

Taslima Nasrin penned this fictional masterpiece in just seven days. As a controversial novel, it sheds light on the heartbreaking plight of individuals who were subjugated and oppressed by their own compatriots due to religious disputes. Taslima herself fell victim to the venom of communalism and fundamentalism. She personally experienced the flames of riots and violence, incited in the name of religion, which wreaked havoc on the innocent people of both Bangladesh and India. During these riots, the Hindu community endured unimaginable maltreatment at the hands of Islamic extremists who resorted to abduction, murder, and the unspeakable horrors of rape against their daughters and wives. The Hindus were ultimately compelled to flee Bangladesh, as the Muslim community no longer wished to coexist with them. Furthermore, the author exposes the insatiable political greed where political leaders, driven by their own self-interest, set their fellow countrymen on a collision course with the chaos of riots. In both Bangladesh and India, politicians manipulate religious sentiments, playing a dangerous game with the lives of their nation's people, all while enjoying their own safety without facing harm. They treat the lives of the people as mere puppets, with complete control in their hands. Nasrin also offers a scathing critique of the male-dominated society where women are subjugated and persecuted under the tyranny of male dominance. Thus, Nasrin's Lajja provides a stark and realistic portrayal of the oppressed communities and the multifaceted injustices they face.

As a victim herself, she displayed remarkable courage in raising her voice to expose the intertwined issues of religious conflict and patriarchal oppression, constructs created by men to confine women within boundaries prescribed by them, where they are denied the freedom to live and act according to their own desires. Through this controversial work, Taslima made a concerted effort to illuminate the suffering of both Hindu and Muslim women, who were subjected to mistreatment and torment by religious fundamentalists. During the riots, Taslima bore witness to the pervasive terror and fear that

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A Study of Selected Indian Novels from an Ecocritical Point of View

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Abstract :- To address the ecological catastrophe on a global scale, science and technology alone are insufficient. We need to modify the way we think about nature. Literature has a place in life: it does not exist apart from it. Our environment is now in danger as a result of the eco-disasters that are already occurring. The environment has posed a danger to both mother earth and human civilization during the past few decades. We are on the verge of a ditch due to the widespread use of natural resources. The goal of this paper is to examine ecocritical viewpoints as they are envisioned in a selection of world literature. The current study examines the ecocritical viewpoints as they are intended in a few pieces of Englishlanguage literature from India and other parts of the world.

Key words :- Ecocriticism, Nature, Novelists, Deep ecology.

Introduction :- The literary analysis emphasizes the environment helps readers develop ecological literacy and consciousness, which helps them take excellent care of Mother Nature. Ecocriticism is a method for interpreting and studying nature literature that is frequently linked to environmental criticism, animal studies, green cultural studies, eco-poetry, deep ecology, ecofeminism, and other related ideologies (Mishra, 2018, pp. 45-48). Hence, eco-literature has given rise to eco-criticism, which was formerly associated with American nature writings and British Romantic literature. All significant canonical literature places a high value on the environment as an integral component of human culture. They might gain various fresh viewpoints because of ecological awareness (Mishra, 2018, pp. 45-48; Geetanjali, 2018, pp. 179-183). Eco-criticism is a

very difficult term to be defined as this term is a sort of umbrella under which multiple approaches fall. In Indian literature, novels play an important role in society, culture and environment etc. Many writers like Amitav Ghosh, Kamla Markandaya, Anita Desai and Arundhati Roy have themes to express their concerns about the problems related to eco-criticism. So, the present work will explore, review and answer all relevant questions and for this purpose, the below-mentioned novels written by different Authors have been selected. This research work is divided into four chapters: AMITAV GHOSH THE HUNGRY TIDE; ARUNDHATI ROY'S THE GOD OF SMALL THINGS; KAMALA MARKANDAYA'S NECTAR IN A SIEVE; and ANITA DESAI'S FIRE ON THE MOUNTAIN.

2023

Amitav Ghosh's novel The Hungry Tide in the Perspective of Ecocriticism

Amitav Ghosh's novel The Hungry Tide :- Is a wellknown Indian English novel that describes ecocriticism in different aspects (Mishra, 2018, pp. 45-48). Amitav Ghosh exposes different aspects of nature in the direction to find a connection between human life and the natural world (Kaur, 2017, pp. 1-11). The Hungry Tide connects nature and humanity, believing that any human activity that disrupts natural elements will ultimately lead to the extinction of life. The story takes place in the Sundarbans located near the Ganga, Padma, Megna, and Brahmaputra Rivers and is the world's largest mangrove forest region (Kaur, 2017, pp. 1-11). The novel effectively depicts the life of the poor people of the Sundarbans, as well as the problems that affect them and their everyday struggle for survival (Mishra, 2018, pp. 45-48). The Hungry Tide represents the continuous transformations that the Sundarban's ecosystem of mangrove forest islands and mudflats undergo

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ECO-CRITICAL ANALYSIS: AMITAV GHOSH'S "*THE HUNGRY TIDE*" AND ANITA DESAI'S "*FIRE ON THE MOUNTAIN*"

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ABSTRACT: In Ghosh's novels "*The Hungry Tide*" and Desai's "*Fire on the Mountain*" eco-critical analysis reveals a compelling exploration of the intricate interdependence of human-nature relationships, urging readers to reflect on the urgency of environmental stewardship in the complex relationship between humanity and nature. In "*The Hungry Tide*" Ghosh intricately weaves a narrative set in the Sundarbans, exploring the complex relationship between humans and the fragile ecosystem of this unique delta. The study illuminates the ecological impact of human interventions, confronting themes of climate change and biodiversity loss. In, Anita Desai's "*Fire on the Mountain*" takes us to the isolated Himalayan region, separating the details of human-nature interactions within the domestic sphere. The study examines Desai's portrayal of the mountains as both a refuge and a formidable force, reflecting the broader implications of environmental degradation. Through an ecocritical lens, this exploration seeks to unveil how these novels contribute to the broader discourse on environmental consciousness and the consequences of human actions on diverse landscapes.

KEYWORDS: Eco-critical study, Amitav Ghosh, The Hungry Tide, Anita Desai, Fire on the Mountain

INTRODUCTION

In ecocritical study, the focus is on analyzing the intricate environmental narratives within two interconnected literary works: Amitav Ghosh's "*The Hungry Tide*" and Anita Desai's "*Fire on the Mountain*". These novels, rather than conforming to conventional storytelling, serve as captivating explorations that immerse readers in the dynamic relationship between human lives and the natural world. Ghosh's narrative unfolds against the backdrop of the Sundarbans, a region with a distinctive ecosystem. The chosen surroundings cease to be mere backdrops; they become integral elements of the storytelling, shaping and being shaped by the characters and events within the narratives. Employing an eco-critical lens, the study seeks to go beyond a conventional literary analysis, aiming to uncover the nuanced reflections of the novelists on ecological themes. Ghosh and Desai use their narratives as mediums to offer insights into the far-reaching consequences of human actions on diverse landscapes and ecosystems. The study, therefore, becomes a journey into the environmental consciousness embedded in these literary studies. This exploration extends beyond the immediate narratives, inviting readers to reflect on the broader discourse surrounding humanity's relationship with the environment.

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RESEARCH

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Infectivity of entomopathogenic nematode against the cabbage butterfly (Pieris brassicae L.) in polyhouse and in field condition

Preety Tomar¹, Neelam Thakur^{1*} and Ambika Sharma²

Abstract

Background: Cabbage butterfly, Pieris brassicae Linnaeus (Lepidoptera: Pieridae), is a major insect pest affecting cole crops worldwide. Excessive applications of chemical-based insecticides have a devastating impression over the organisms and environment.

Results: In this study, entomopathogenic nematode (EPN) *Heterorhabditis bacteriophora* Poinar strain EUPT-S26 (local isolate) was evaluated for Pieris brassicae control under polyhouse and field conditions. Under the polyhouse conditions, the highest insect mortality 91.6 and 94.0% was observed in the plots treated with the nematodes suspension 1500 IJs/ml and 2000 IJs/ml, respectively. Based on the highest cabbage plant protection under polyhouse conditions, H. bacteriophora EUPT-S26 was also applied for field assays in the course of the crop's productive phase. Data demonstrated from the field treatments signify the highest concentration (2000 IJs/ml) showed the maximum larval mortality and least damage percentage $45 \pm 1.07\%$ that remained constant until harvesting; this resulted in the highest productivity in polyhouse and under field conditions.

Conclusion: According to assessed field conditions, it was suggested to perform 3 applications of EPNs during the vegetative phase and at the time of head formation to increase productivity and to reduce damage. The results approved that EPNs are an effective alternative of chemical-based insecticides to control the cabbage butterfly.

Keywords: Biocontrol, Damage, Heterorhabditis bacteriophora, Pieris brassicae, Productivity

Background

Pieris brassicae Linnaeus of family Pieridae is the key insect pests of cabbage. It generates significant losses as compared to costs of synthetic chemical insecticides for its control (Kasi et al. 2021). Cabbage butterfly is dispersed all over the world where brassicaceae are planted. Winter generations showed a longer life stages than those through the rainy and summer seasons. Temperature range (15.2-30 °C) was found ideal for its multiplication. Other different abiotic factors did not affect the life stages of insect (Thakur and Deka 1997). The gregariously

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feeding insect larvae consumed the whole leaves, except veins of the cauliflower, cabbage and flower buds of broccoli (Boczek and Lewandowski 2016). Over 50% yield losses have been observed due to the infestation by these insect pests in cabbage annually (Abbas et al. 2021). Sood (2007) reported that cabbage butterfly caused extensive damage to the cabbage crop in the month of April (last week) and May in Himachal Pradesh, India.

Although the chemical synthetic insecticides has been proven most trustworthy for the control of these voraciously feeding larvae, the repercussions of the persistent use of these synthetic insecticides result in various environmental hazards, especially the chemical residues also affect the soil fertility, affects the wildlife, contaminate resources of ground water, developed resistance amongst insects along with re-emergence of huge insect



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Tailoring of structural, optical and electrical properties of anatase TiO₂ via doping of cobalt and nitrogen ions



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ABSTRACT

Pure (pristine) anatase and mono-doped and co-doped derivatives of TiO₂ having nitrogen (N) and cobalt (Co) as dopants with respective fixed doping concentrations of 0.7 mol.% and 1.0 mol.% were synthesized using auto-combustion sol-gel technique. The doping effects at corresponding non-metal and transition metal sites of TiO₂ on the basis of the structural, optical and electrical properties have been investigated. X-ray diffraction (XRD) measurement confirms the formation of pure anatase phase of TiO₂ for all samples having l41/amd space group of tetragonal structure which has been also verified by the Raman spectroscopy measurement. Various crystallographic parameters have been calculated by performing Rietveld refinement of XRD data including average crystallite size that has been observed in the range of 10–15 nm. Pure anatase phase indicates the incorporation of Co^{2+} into TiO_2 lattice which assists the substitution of N in place of oxygen in co-doped TiO₂. The band gap tuning towards the visible region from 3.2 to 2.1 eV has been achieved with mono-doping and co-doping of the N and Co in TiO₂ lattice. This can be described in terms of the formation of localized levels of N-2p and Co-3d states in mono-doping and an isolated intermediate band formation in co-doping case. Electrical properties have been investigated in details and explained as the synergetic effects of structural and inherent ionic characters of various dopants. The observed band gaps of all doped samples lie within the visible region which makes them pertinent as the solar energy harnessing materials for photocatalytic and photovoltaic applications. © 2021 Published by Elsevier Ltd on behalf of Chinese Society for Metals.

1. Introduction

 TiO_2 is a global demanding material among the several semiconductors because of its low cost, high stability and harmless nature to, both, human and environment [1–3], TiO_2 exists naturally in three crystalline phases, namely, anatase, rutile and brookite [4]. Among these polymorphs, the anatase phase has lower density, low dielectric constant, higher electron mobility and lower recombination rate of electron-hole pairs that make it preferable for photovoltaic application [5]. Limitation with anatase TiO_2 is its wide band gap of ~ 3.2 eV due to which it remains active for UV radiation which is approximately 5% of the solar spectrum on the

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earth's surface [6,7]. In order to utilize the maximum part of the solar radiation, it is important to make TiO_2 sensitive for visible light without deviating it's most efficient anatase phase. The extensive research is going on worldwide for the visible light absorption of anatase TiO_2 using some promising techniques that involve mono-doping and co-doping of transition metal or non-metal ions.

The doping of transition metal ions, i.e. Cu, Co, Fe, Cr, Ag, V, etc., up to a specific doping concentration in TiO_2 [7–10] is able to reduce its energy band gap as well as to suppress the recombination rate of photon induced electron–hole pairs. However, the recombination may increase at higher dopant concentrations of these metal ions [11]. On the other hand, doping of non–metals such as N, S and C in TiO_2 replaces O in the TiO_2 host lattice to introduce impurity energy states just above the valence band of TiO_2 which results in the reduction in band gap energy [12–15]. Further, the interest of co–doping of metal and non–metal ions in TiO_2

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Prokaryotic diversity and community structure in the rhizosphere of Lantana weed (*Lantana camara* L.)

Upasana Gola¹, Shilippreet Kour¹, Tanvir Kaur², Kahkashan Perveen³, Najat A. Bukhari³, Jamilah A. Alsulami⁴, Damini Maithani⁵, Hemant Dasila¹, Manali Singh⁶ and Deep Chandra Suyal^{1,7*}

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Lantana weed (Lantana camara L.) is among the most noxious weeds in the world. Keeping in mind its invasive behavior and great ecological tolerance, it becomes imperative to analyze the structure and function of associated microbiome. In this perspective, Illumina-based metagenome sequencing was performed to gain a better understanding of prokaryotic diversity and community structure in the rhizosphere soil of L. camara L. The organic carbon, nitrogen, phosphorus, and potassium contents in the rhizosphere soil were 0.91% (+ 0.21%); 280 Kg ha⁻¹ (+ 4.02 Kg ha⁻¹), 54.5 Kg ha⁻¹ (+ 3.12 Kg ha⁻¹), and 189 Kg ha⁻¹ (\pm 6.11 Kg ha⁻¹), respectively. The metagenome analysis revealed the existence of 41 bacterial and 2 archaeal phyla, with only 12 showing $\geq 1\%$ abundances. Pseudomonadota was the dominant phylum with 31.3% abundance, followed by Actinomycetota (20.9%). Further, 54 different genera were identified with the highest abundance of Devosia (2.8%). The PICRUSt analysis predicted various functional traits in the soil metagenome, with general cellular functions dominating, followed by stress tolerance. Moreover, 10% of the functions were associated with nitrogen fixation, phosphate solubilization, and potassium mobilization. In conclusion, the present study revealed the existence of diverse prokaryotic communities in the rhizosphere of the L. camara L. which was primarily associated with stress response and plant growth promotion. To the best of our knowledge, this study documents for the first time the L. camara L. microbiome. Furthermore, the identified genera can be explored for agricultural needs in future.

KEYWORDS

Illumina HiseqX, PICRUSt analysis, bacterial diversity, metagenomics, weed plants

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Prevalence of antibiotic-resistant Gram-negative bacteria having extended-spectrum β-lactamase phenotypes in polluted irrigation-purpose wastewaters from Indian agro-ecosystems

Achhada Ujalkaur Avatsingh¹, Shilpa Sharma¹, Shilippreet Kour¹, Yukta Arora¹, Sheetal Sharma¹, Divya Joshi², Prem Prashant Chaudhary³, Kahkashan Perveen⁴, Mohab Amin Kamal⁵ and Nasib Singh^{1*}

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Antibiotic resistance in bacteria has emerged as a serious public health threat worldwide. Aquatic environments including irrigation-purpose wastewaters facilitate the emergence and transmission of antibiotic-resistant bacteria and antibiotic resistance genes leading to detrimental effects on human health and environment sustainability. Considering the paramount threat of ever-increasing antibiotic resistance to human health, there is an urgent need for continuous environmental monitoring of antibiotic-resistant bacteria and antibiotic resistance genes in wastewater being used for irrigation in Indian agro-ecosystems. In this study, the prevalence of antibiotic resistance in Gram-negative bacteria isolated from irrigation-purpose wastewater samples from Sirmaur and Solan districts of Himachal Pradesh was determined. Bacterial isolates of genera Escherichia, Enterobacter, Hafnia, Shigella, Citrobacter, and Klebsiella obtained from 11 different geographical locations were found to exhibit resistance against ampicillin, amoxyclav, cefotaxime, co-trimoxazole, tobramycin, cefpodoxime and ceftazidime. However, all the isolates were sensitive to aminoglycoside antibiotic gentamicin. Enterobacter spp. and Escherichia coli showed predominance among all the isolates. Multidrug-resistance phenotype was observed with isolate AUK-06 (Enterobacter sp.) which exhibited resistant to five antibiotics. Isolate AUK-02 and AUK-09, both E. coli strains showed resistant phenotypes to four antibiotics each. Phenotypic detection revealed that six isolates were positive for extendedspectrum β -lactamases which includes two isolates from *Enterobacter* spp. and *E*. coli each and one each from Shigella sp. and Citrobacter sp. Overall, the findings revealed the occurrence of antibiotic resistant and ESBL-positive bacterial isolates in wastewaters utilized for irrigation purpose in the study area and necessitate continuous monitoring and precautionary interventions. The outcomes of the study would be of significant clinical, epidemiological, and agro-environmental importance in designing effective wastewater management and environmental pollution control strategies.

REVIEW ARTICLE

Open Access

Endosymbiotic microbes from entomopathogenic nematode (EPNs) and their applications as biocontrol agents for agro-environmental sustainability



Preety Tomar¹, Neelam Thakur^{1*} and Ajar Nath Yadav²

Abstract

Background: The biological diversity on planet earth is declining day by day, due to different factors such as excessive applications of pesticides. The utilization of chemical pesticides affected environment as well as microorganisms. The awareness among the peoples towards the hazards by the residual toxicity of chemical pesticides should be developed for agro-environmental sustainability.

Main body: Entomopathogenic nematodes (EPNs) are the bacto-helminth parasites which show classical mutualism with the genera *Xenorhabdus* and *Photorhabdus*. The nematodes along with its endosymbiotic bacteria have a biocontrol potential which could be used to reduce chemical pesticides. Applications of bioagents have been reported and resulted in considerable reduction in pathogens. Furthermore, these bioagents are biodegradable, eco-friendly and easy to apply for protection of crops against diverse pathogenic organism. The nematode-bacterium complexes are effective against huge range of bacteria, fungi, nematodes and insects that are harmful to the crops. Along with biocontrol potential, the endosymbionts produce diverse secondary metabolic compounds, exoenzymes and toxic compounds that show antibiotic, antimycotic, nematicidal, miticidal and anticancerous properties.

Conclusion: The present review deals with the diversity of endosymbiotic microbes from EPNs and their role in biocontrol for the agro-environmental sustainability.

Keywords: Agricultural sustainability, Biocontrol, Diversity, Entomopathogenic nematode, *Photorhabdus*, *Xenorhabdus*

Background

Entomopathogenic nematodes (EPNs) are microscopic roundworms that belong to the families Heterorhabditidae and Steinernematidae of phylum Nematoda. EPNs are beneficial nematodes that exhibit a holoparasitic mode of survival (Bhat et al. 2020). The EPNs have been reported to survive in most of environmental conditions

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except psychrophilic conditions of Antarctica (Hominick 2002). The EPNs from genus *Steinernema* and *Heterorhabditis* were considered deadly fatal for a number of agricultural insects (Liu et al. 2020). Globally, 17 species of genus *Heterorhabditis* and 100 species of genus *Steinernema* have been reported that are found to be lethal for insect pests (Bhat et al. 2020). These nematodes showed mutualistic associations with endosymbiotic bacterial species that live inside the nematode. A major role has been played by these bacterial endosymbionts in nutritional physiology (Feldhaar 2011). The endosymbionts *Xenorhabdus* and *Photorhabdus* reside in symbiotic



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