DEPARTMENT OF MICROBIOLOGY

GOVT. V.Y.T. PG AUTONOMOUS COLLEGE, DURG 491001(C.G.) INDIA

(Former Name – Govt. Arts & Science College, Durg)

National E-Conference on

'Promises and Challenges with Microorganisms'

On the occasion of

International Microorganism Day

17.09.2021

Programme Minutes:

S.No.	Activity	Time	
1	Welcome	11:00 am	Mrs. Rekha Gupta
2	About the theme	11:05 am	Dr. Pragya Kulkarni
3	Message by IQAC Coordinator	11: 10 am	Dr. Jagjeet Kaur Saluja
4	Blessings by Patron	11:15 am	Dr. R. N. Singh
5	Introduction of Key Note speaker	11: 20 am	Dr. Sunitha B. Mathew
6	Key note Address	11:25 am	Dr. G.D. Sharma
7	Vote of thanks	12: 30 pm	Dr. Sanju Sinha
8	Introduction of Dr. R.C. Dubey	12:35 pm	Dr. Shriram Kunjam
9	Lecture	12.40 pm	Dr. R.C. Dubey
10	Vote of thanks	01:40 pm	Ms. Anamika Sharma
11	Introduction of Dr. Ray	01:45 pm	Dr. Shweta Pandey
12	Lecture	01.35 pm	Dr. Shashikant Ray
13	Vote of Thanks	02: 30 pm	Dr. Vijay Laxmi Naidu
14	Poster Presentation	02: 30 pm	Ms. Anamika Sharma
14	Conference report	03:00pm	Mrs. Rekha Gupta
15	Final Vote of thanks	02.40 pm	Mrs. Neetu Das

Theme Note by Convener:

As we all know, microbes are essential part of everyday life, their involvement in health and the environmental issues, and now as a study material for research made them substantial part of modern science.

During past one and half years, microbes has been much in the news. From outbreaks of Corona, to discussions on the benefits of raw and fermented foods, to capability to live in extreme environments and to the modest engineered microbe, Microorganisms become a figure for thinking of the presents and possible futures.

Noting such dominant representations of microbial life, the impression has shifted now from an expression of danger, to one of promise, that microbes, especially when flourishing as microbial communities, are being supported as model ecosystems, and as suggestions of how microorganisms and human relations could, should, and might be.

Climate change and environmental pollution are major challenges for humanity that affect multiple ecosystem services, possibly leading to irreversible change to beyond tipping points. As per the report publish in May 2020, that despite of fundamental importance of microbes in the functioning of soils, they are rarely considered in global earth system models, International Panel of Climate Change predictions, biodiversity conservation, or even within the global sustainable development goals.

The crucial role of microbial community in undertaking the societal challenges ahead is also a strong encouragement to make progression in the field. Fundamental role of soil microbial communities in biogeochemical cycles and transformation pathways for determination of availability of plant nutrients and by regulating the amount of net storage of organic carbon in soil and emissions of greenhouse gases like methane and nitrous oxide.

The problem of antimicrobial resistance is one of the most significant threats facing global health, wellbeing and food security. The acute infections are generally associated with the planktonic growth mode, whereas chronic infections are generally associated with biofilm formation. By explanation, chronic infections are poorly resolved by the immune system and/or antibiotic intervention. This is partly because biofilms are poorly permeable to some antibiotics, and partly because the slow-growing cells in the biofilm's centre are less susceptible to these agents.

Today's National Conference is devoted to celebration of International Microorganism Day with the view to discuss some of these issues.

I have complied some interesting information regarding IMD for our participants.

About International Microorganism Day

International Microorganism Day is an initiative launched by the Portuguese Society of Microbiology in 2017 to combine science dissemination activities and to teach and provide a platform for microbe lovers around their world to share their passion and knowledge. The activities introduced as open laboratories, DIY experimental exhibits, Microbial products testing stands, and workshops for high school and university undergraduates' students and high school teachers, organized with the participation of national and international scientists working in the field of Microbiology.

Since that initial edition, celebrations have been held in Portugal and internationally under an interconnected identity through logos and mascots produced in Portugal. It has been supported by FEMS to increase the size and impact of these events and especially in 2020, to present the positive aspects of microorganisms and also to raise awareness about the importance of microorganisms and microbiology research among the general public and received great attention from all over the world.

Making the celebrations more popular, IMD Mascots were launched every year.

SACA wea the first mascot inspired in single cell fungi, *Saccharomyces* yeasts. Considering its uses to produce bread, beer and wine and the other one was *Candida albicans*, cause infections in humans.

BAK was the angry looking mascot inspired in bacteria the Bacillus, typical rod shaped. This genus *Bacillus anthracis*, the agent of anthrax, and the *Bacillus cereus*, a nasty bug causing food poisoning.

GILLUS was selected for the IMD 2020 edition, is imspired in the filamentous fungi from the genus Aspergillus. This fungus usually grows on decaying vegetation and dead leaves and most of us encounter them on a daily basis. It can cause aspergillosis, a disease mostly restricted to immunocompromised individuals.

RIZZO is the new mascot for IMD 2021, launched on 15 August 2021, it is the winner design for the IMD Mascot Art Competition with 39 fantastic entries, from several different regions of the globe including Maharashtra, Tamil Nadu, Andhra Pradesh states of India. It is inspired in rhizobia, a group of bacteria that establishes symbiosis relationships with legume plants. Legumes supply nutrients to rhizobia, whereas these bacteria fix nitrogen gas from the atmosphere and supply it in forms that the legume plants can use.

The theme and schedule of this National conference is conceptualized with the hope to inculcate some new ideas among the young microbiologists.

With this, I again welcome the guests and the participants and wish the participants for great learning.

Thank you all…

Patron's Note:

Microorganisms are invisible to the human eye but their activities are extensive and significant. They have the hidden power which finds append in many everyday activities, like to ferment foods and treat sewage, to produce fuel, enzymes, and other bioactive compounds and are a vital component of fertile soil. In the human body, microorganisms make up the useful human microbiota and the pathogens are responsible for many infectious diseases leading to studies of disease prevention and control measures.

Owing to a significant impact upon mankind, knowledge of these dynamic microbial activities, like how they impact our lives and how they may be connected for the benefit of humankind is very important during these days. Before the Corona pandemic, microbiology literacy was very low among the public. But, now understanding of key microbial activities is essential not only for up-to-dating personal conclusions, but also for policy development in government and business sectors.

With the hope, that this National Conference will contribute a major role for creating confidence among the budding scientists of microbiology to take the challenges and to keep promises in the field for social awareness.

I wish this conference a great success.

Thank you all….

IQAC Coordinator's Note:

Microorganisms flourish everywhere on planet Earth as long as there are opportunities for exchanging Redox energy with the environment and for the harvest of nutrients including life's central element, carbon.

While Phototrophy was conceptually easily accessible to scientists and laypersons thinking, the discovery of lithotrophy ("chemosynthesis") allowed for a biochemical and physiological explanation of light-less primary production by microorganisms.

Studies on microbiology was leading from the first scientific implication of a bacterium as the causal agent of disease in animals and plants followed by numerous etiological reports that concerned bacteria, parasites, fungi and viruses as the causal agents of disease, paired with research on how to protect healthy and infected hosts from (re)exposure, which also started the race for the cure and, eventually, for finding a "silver bullet." This time was also the beginning of research that paved the way for the purposeful use of microbes to the benefit of mankind such as the souring of milk in today's dairy industry and the use of nitrification for sewage treatment and bioremediation.

Now a days the use of the term "Microbe" has changed with time and it described at one point all living things not visible with the naked eye, the current situation of science today justifies use of mainly the part "genetically programmed entities" from animals and plants to gather with microbes and also the viruses as they are such entities even though not living organisms that can escape from host cells without losing their genetic program.

I am sure, today's National Conference will definitely support the theme and able to link the boundaries between Promises and Challenges.

Thank you all …

Key Note Address: Prof. G.D. Sharma – Explained theDiversity of Microorganisms and their useful and harmful activities still to be studied by young researchers.

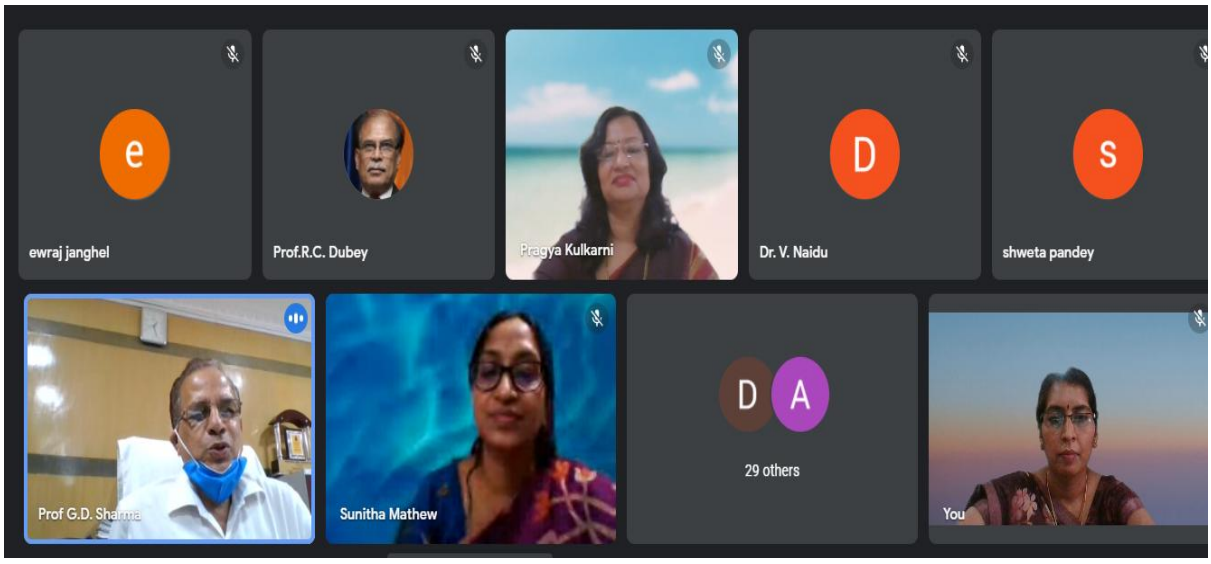
Lecture: Prof. R.C. Dubey: Promises and Challenges with Microorganisms – Illustrated data on depiction of various types of diseases, their causal organisms, prevention ad treatment measures in Vedic literatures.

Lecture Dr. Shashikant Ray: Bacterial Cell Division Machinery and the Role of FtZs Protein in inhabiting Bacterial cell Division Mechanisms – Elucidate the role of FtZs protein for controlling the cell division in Bacteria leading to control bacterial infections.

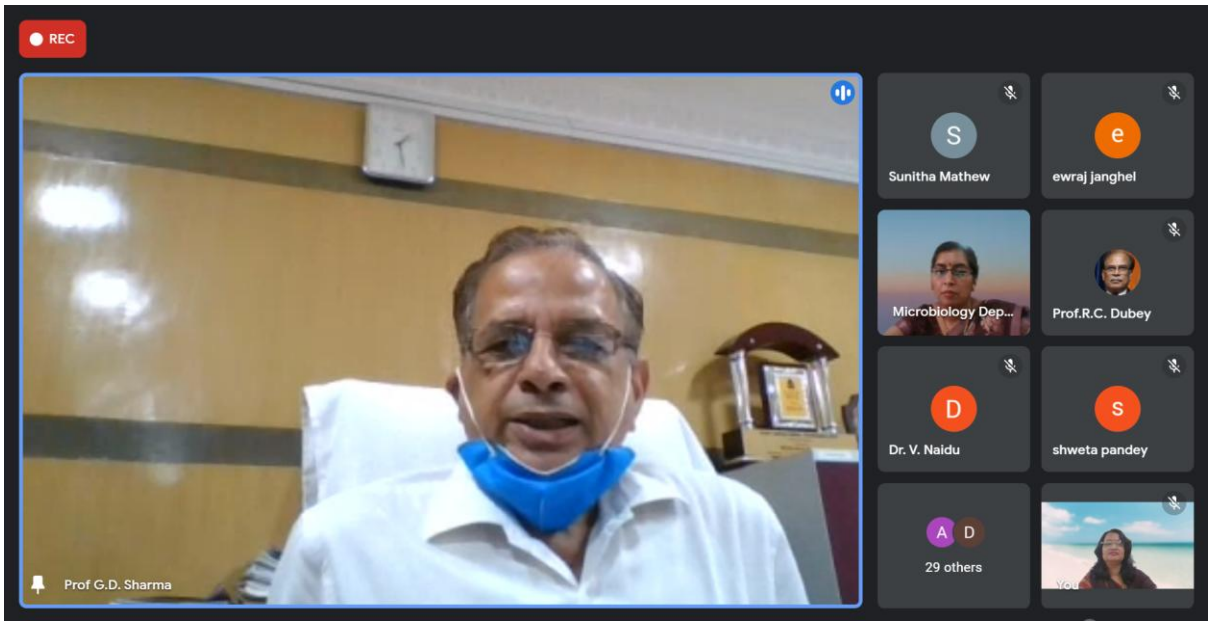
e-Poster Presentation:

1. Dr.Rashmi Parihar: Evaluation of Bacterial consortium efficacy to remove organic and inorganic contents of industrial waste water
2. Ms. Anamika Sharma: Entomopathogenic fungi: A potential source for biological control agent
3. Ms. Prachi Jha: Antimicrobial activity of biologically synthesized gold ana-particles using edible mushroom Cantharellus sp.

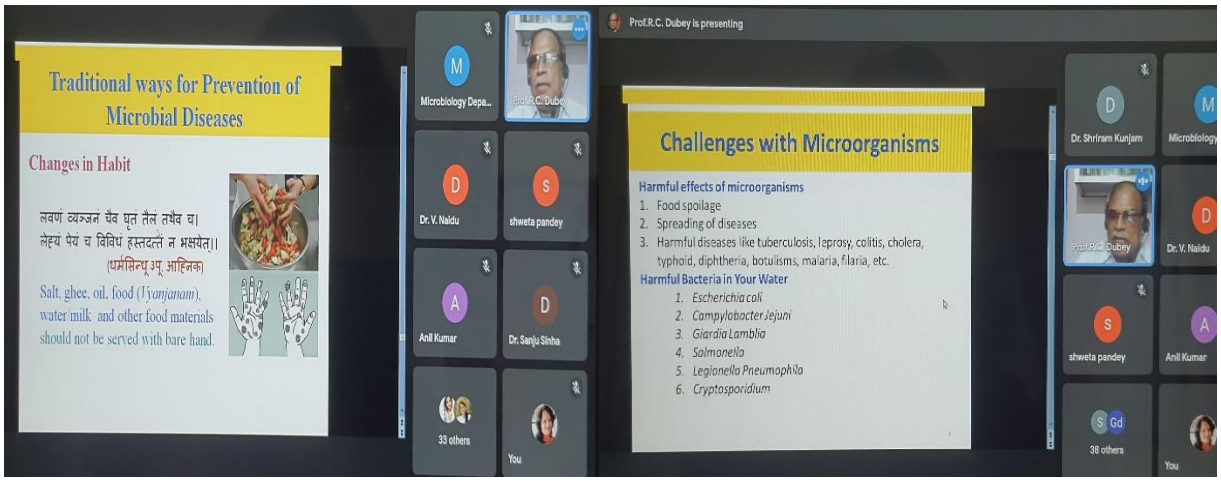
Concluding Report by Organizing Secretory:



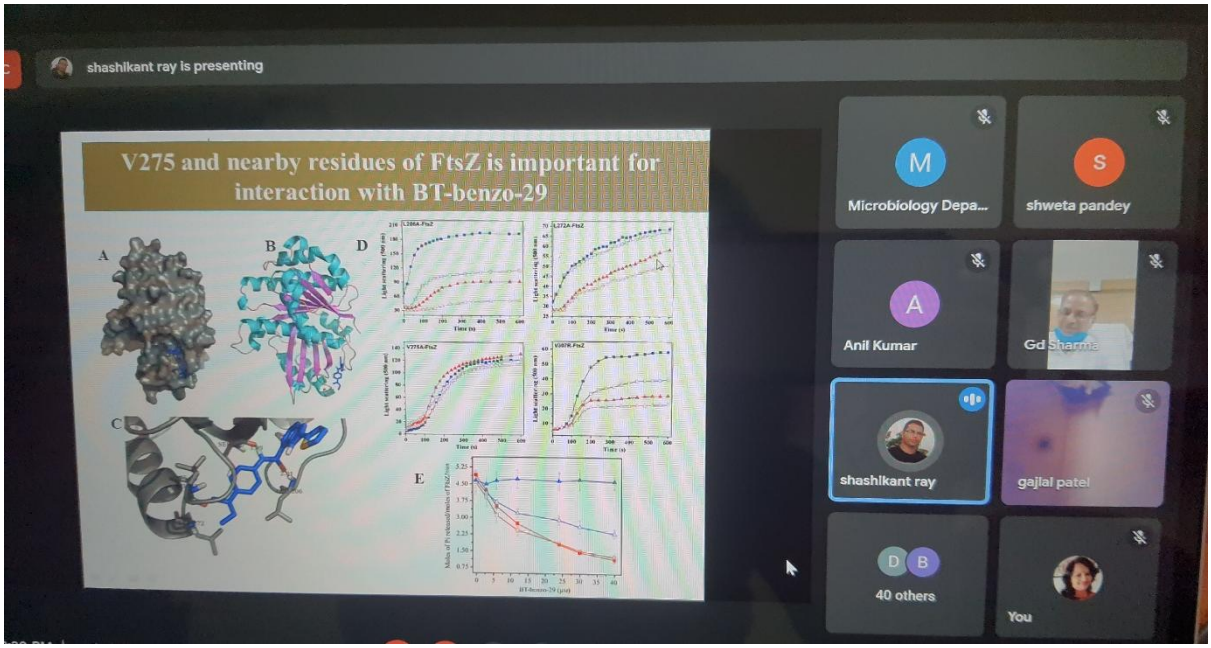
Inauguration and Welcome of Guests



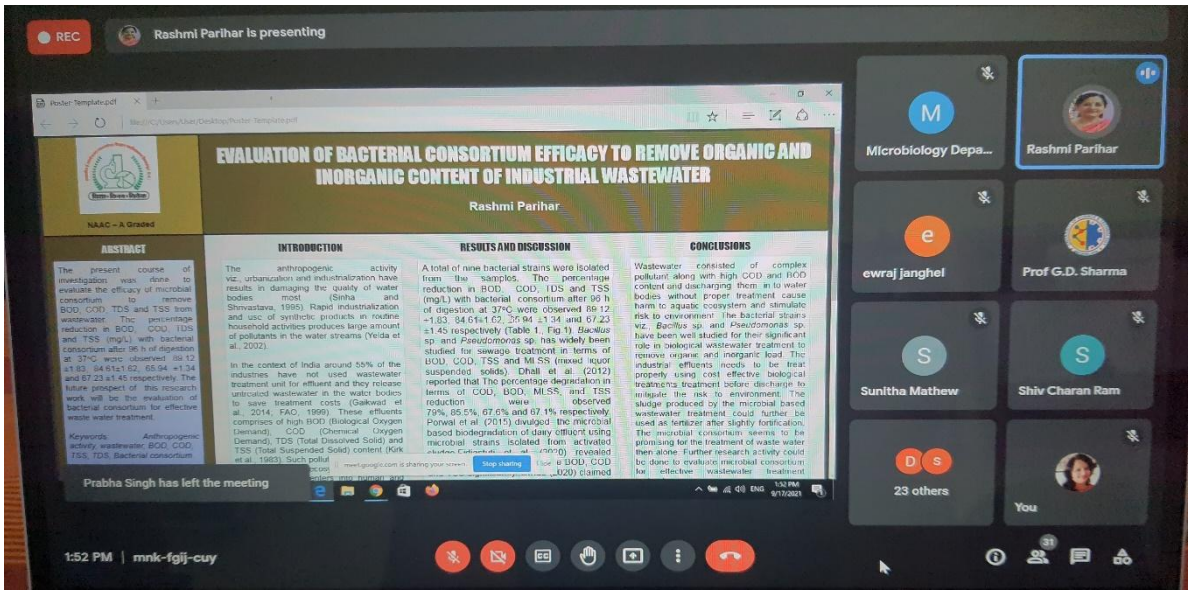
Key Note Address: Prof. G.D. Shaarma, VC, Uni. Of Scienc and Technology, Meghayala



Lecture: Prof. R.C. Dubey, Gurukul Kangri Vishwavidyalaya, Haaridwar, Uttarakhand



Lecture: Dr. Shashikant Ray, Mahatma Gandhi Central University, Motihari, Bihar



Poster Presentation by Participants

Concluding Note and Vote of Thanks

कार्यालय प्राचार्य
शासकीय विश्वनाथ यादव तामस्कर स्नातकोत्तर स्वशासी महाविद्यालय, दुर्ग (छ.ग.)
{पूर्वनामः शासकीय कला एवं विज्ञान महाविद्यालय, दुर्ग (छ.ग.)}
नैक ग्रेड–ए+, सी.पी.ई.–फेस–3, डी.बी.टी.–स्टार कालेज
फोन नं. 0788–2359688, फैक्स नं. 0788–2359688,
Website: www.govtsciencecollegedurg.ac.in

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प्रेस विज्ञप्ति

साईंस कालेज, दुर्ग में राष्ट्रीय सम्मेलन का आयोजन

"सूक्ष्मजीवों के साथ वादे एवं चुनौतियां"

(Promises and Challenges with Microorganisms)

शासकीय विश्वनाथ यादव तामस्कर स्नातकोत्तर स्वशासी महाविद्यालय, दुर्ग के सूक्ष्मजीव विज्ञान विभाग द्वारा अंतर्राष्ट्रीय सूक्ष्मजीव दिवस के अवसर पर 17 सितंबर 2021 को एक दिवसीय राष्ट्रीय सम्मेलन का आयोजन किया गया। उद्घाटन सत्र में संयोजक एवं विभागाध्यक्ष डॉ. प्रज्ञा कुलकर्णी ने सम्मेलन की विषय–वस्तु, अंतर्राष्ट्रीय सूक्ष्मजीव दिवस का इतिहास एवं महत्व को समझाते हुए बताया कि वर्तमान में सूक्ष्मजीवों के अध्ययन में आधुनिक तकनीक के उपयोग को सम्मिलित किया जाना अति आवश्यक है।

महाविद्यालय आईक्यूएसी संयोजक डॉ. जगजीत कौर सलूजा एवं प्राचार्य डॉ. आर.एन. सिंह ने कार्यक्रम की अवधारणा एवं महत्व का परिचय देते हुए इस तरह के आयोजन की प्रशंसा की। सम्मेलन में मुख्य वक्ता के रूप में अपने विचार व्यक्त करते हुए डॉ. जी.डी. शर्मा, कुलपति विज्ञान एवं तकनीकी विश्वविद्यालय, मेघालय ने सूक्ष्मजीवों संबंधित शोध कार्यो में सामाजिक आवश्यकता एवं तकनीकी ज्ञान के उपयोग पर जोर दिया।

दूसरे वक्ता के रूप में गुरूकुल कांगड़ी विश्वविद्यालय हरिद्वार के प्राध्यापक डॉ. आर. सी. दुबे ने बताया कि सूक्ष्मजीवों एवं उनके मानव जीवन पर प्रभावों का ज्ञान मानव जाति को वेदों के समय से था। डॉ. दुबे ने अथर्ववेद की ऋचाओं के माध्यम से जानकारी दी कि वैदिक अध्ययन सूक्ष्मजीवों की विषमता एवं अनुकूलता से भरपूर एवं समृध्द है।

सम्मेलन के तीसरे वक्ता के रूप में महात्मा गांधी केन्द्रीय विश्वविद्यालय, मोतीहारी के प्राध्यापक डॉ. शशिकांत राय ने अपने स्वयं के अध्ययन को प्रस्तुत करते हुये बताया कि जीवाणुओं की कोशिका विभाजन यांत्रिकी का उपयोग करते हुए हम नये जीवाणु रोधी पदार्थों को विकसित कर सकते है, जिसमें जीवाणु कोशिका झिल्ली के FTZ प्रोटीन को लक्षित यौगिकों द्वारा स्क्रीनिंग कर आगे कोशिका विभाजन को बाधित किया जा सकता है।

कार्यक्रम के दूसरे सत्र में प्रतिभागियों ने पोस्टर के माध्यम से अपने कार्यो को प्रस्तुत किया, जिनमें शासकीय ई राघवेन्द्र राव महाविद्यालय, बिलासपुर की डॉ. रश्मि परिहार, मैट्स विश्वविद्यालय, रायपुर की प्राची झा एवं शासकीय विश्वनाथ यादव तामस्कर स्नातकोत्तर स्वशासी महाविद्यालय, दुर्ग की अनामिका शर्मा प्रमुख थी।

कार्यक्रम के अंत में आयोजन सचिव डॉ. रेखा गुप्ता ने संपूर्ण सम्मेलन की परिणाम रिपोर्ट को साझा किया एवं धन्यवाद ज्ञापन डॉ. नीतू दास ने किया। संपूर्ण कार्यक्रम में महाविद्यालय के प्राध्यापक डॉ. अनिल कुमार, डॉ. सुनीता बी. मैथ्यू, डॉ. संजू सिन्हा, डॉ. श्रीराम कुंजाम, डॉ. विजयलक्ष्मी नायडू एवं डॉ. श्वेता पांडे का विशेष सहयोग प्राप्त हुआ।

प्रति,

संपादक/ब्यूरो चीफ
दैनिक .....दुर्ग

इस निवेदन के साथ कि कृपया इसे जनहित में समाचार के रूप में प्रकाशित करने का कष्ट करें।

प्राचार्य
शास.वि.या.ता.स्नात.स्वशासी महावि.
दुर्ग (छ.ग.)