



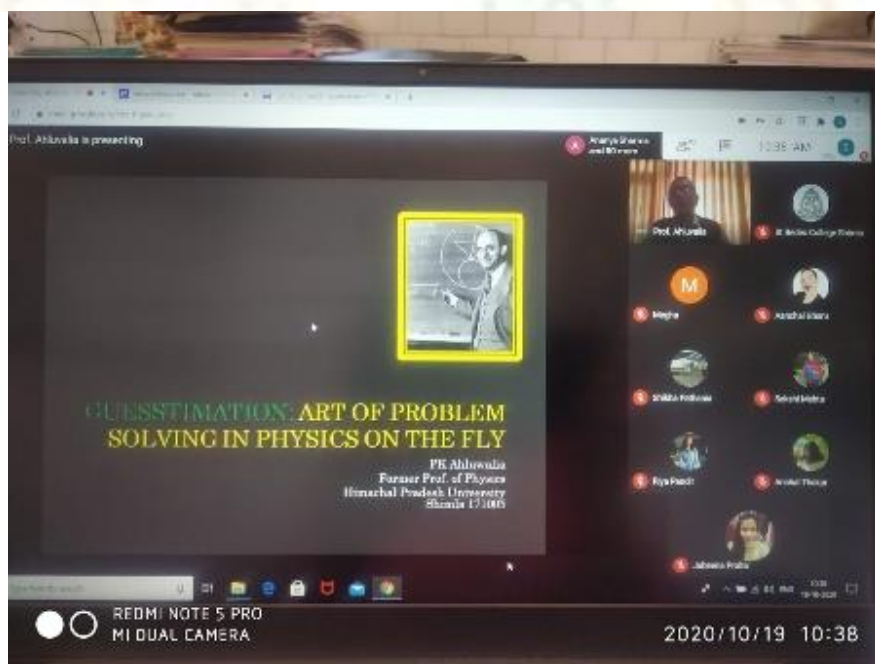
## Activities for the session 2020-21

### WEBINAR OR WORKSHOP ORGANIZED

**Dated:** October 19, 2020

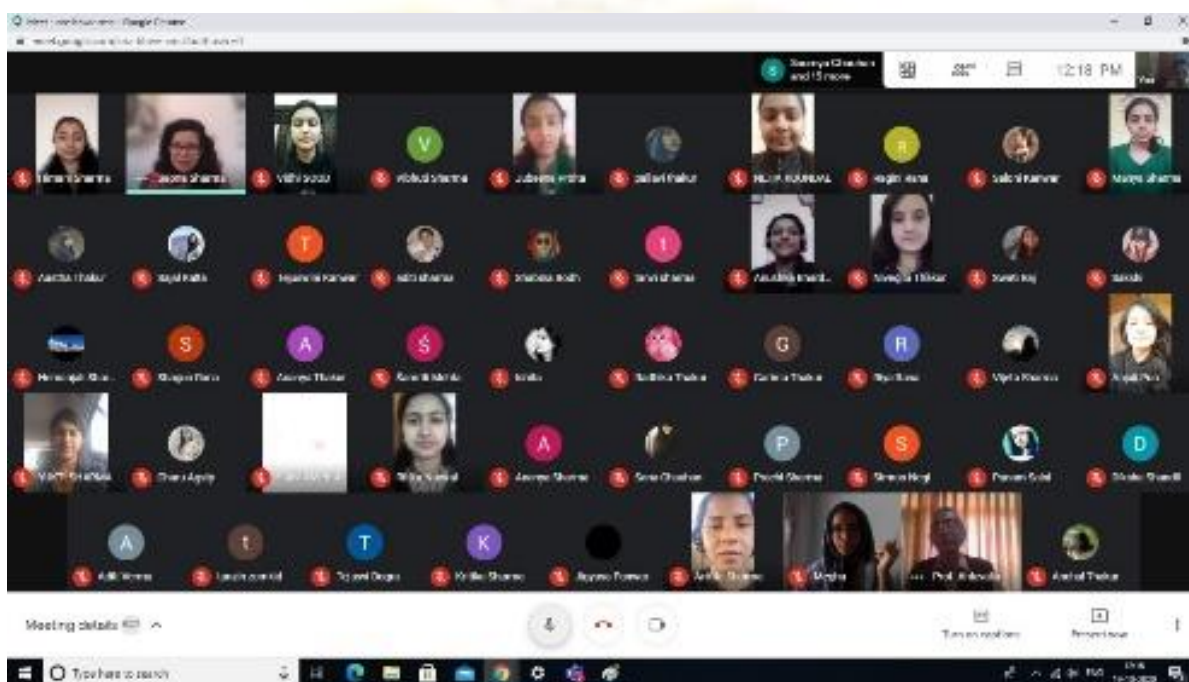
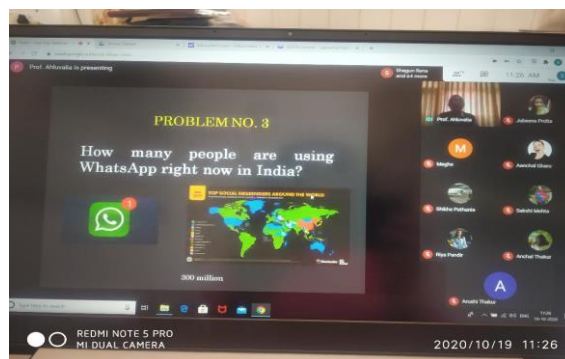
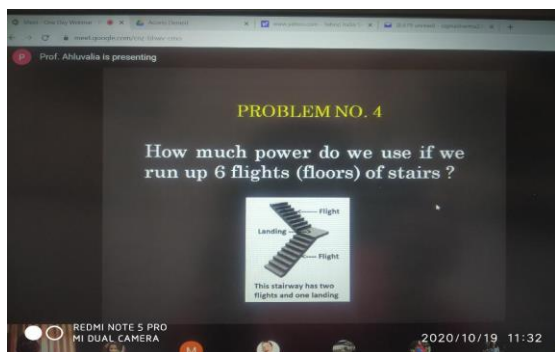
**Event Name:** One Day Webinar on the topic 'Guesstimation: Art of Problem Solving in Physics on the Fly'.

**Description:** Physics department organized a one-day webinar for the students to facilitate inclusive learning opportunities during the period of Covid-19 pandemic, where the teaching mode had been changed to online. Speaker for the session was Prof. P.K. Ahluwalia, former Prof. in the department of physics, Himachal Pradesh University. He enlightened the students about Fermi problems and tricks to solve them by taking into consideration the underestimated and overestimated values.





## Department of Physics St. Bede's College, Shimla



## SIX-DAY ONLINE WORKSHOP

**Dated:** February (15-20, 2021)

**Event Name:** Six-day online workshop entitled 'Spreadsheets: A Tool for Developing Mathematical & Computational Skills in UG students'

### Description:

As per the National Education Policy 2020, workshop aimed at enabling students to make use of spreadsheets as a mean of formulating a problem for solution on a computer and develop mathematical and computational thinking. It was emphasized that computational thinking is an essential skill for life just



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as reading, writing and arithmetic. Workshop was organised as a structured class with exposure to problems drawn from physics, chemistry and mathematics in the form of assignments, quizzes and discussion board. Students were also sensitized towards visualisation of scientific data, computing complex problems by developing a schemata for implementing it on spreadsheets on the fly.

The resource persons were Prof. P.K.Ahluwalia. (Retd.) Prof. Physics, Himachal Pradesh University, Dr. Sarmistha Sahu (Retd.) Assoc. Professor, Department of Physics, Maharani Lakshmi Ammanni College for Women, Science Post, Bangalore and Dr. Sapna Sharma, Assoc. Professor, Department of Physics, St. Bede's College Shimla. The workshop aimed at enabling students to make use of spreadsheets as a mean of representing scientific data and computing complex and to plot various types of graphs to display data and visualize the patterns.

The screenshot shows a Google Meet interface. The main window displays a presentation slide titled "My Grand Vision" with the following content:

- Computational thinking will be a fundamental skill used by everyone in the world by the middle of the 21<sup>st</sup> Century.
  - Just like reading, writing, and arithmetic.
  - Incestuous: Computing and computers will enable the spread of computational thinking.
  - In research: scientists, engineers, ..., historians, artists

Below the slide is a video thumbnail of Jeannette Wing with the caption "Jeannette Wing on Computational Thinking". The meeting controls at the bottom show "PK Ahluwalia is presenting". The participant grid on the right includes: You, PK Ahluwalia, Sarmistha Sahu, vijay kumar Sanoria, Nivedita Thakur, Anchal Thakur, Nidhi Sharma, Samrith Mehta, and Hemanjali Sharma. The meeting details at the bottom indicate "Turn on captions" and "PK Ahluwalia is presenting". The system tray at the very bottom shows the time as 17:17 on 15-02-2021.



Meeting interface showing a presentation slide titled "Experimental result". The slide contains the following content:

**Experimental result**

$$T_{1/2} = \frac{\ln(.5)}{\ln(1 - 1/6)} = 3.8$$

$T_{1/2} = \frac{\ln 2}{\lambda} = \frac{0.693}{0.18} = 3.85$

$T_{1/2} = \frac{\ln 2}{\text{slope}} = \frac{0.693}{0.185} = 3.75$

Decay using 6-sided dice(cube)

Decay using 6-sided dice  
Ln(Nt/No) vs t

Meeting interface showing a grid of participants in a video conference. The participants are:

- You
- Meenal Chauhan
- Sakshi Mehta
- Isha Thakur
- PK Ahluwalia
- Himani Sharma
- Sarmistha Sahu
- vijay kumar Sanoria
- Vidhi SOOD

Meeting details: Turn on captions, Present now



## **ONLINE PRESENTATIONS BY STUDENTS**

**Dated:** December, 2020

**Event Name:** Online presentations by students

**Description:** Students of B.Sc. III presented their projects on various topics in the form of power point presentation. Topics covered were on

- Solar pump
- Geothermal energy
- Wind energy
- Water Mills
- Biogas Stove
- Futuristic Renewable Energy