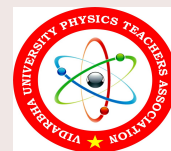




VIDYA VIKAS SHIKSHAN SANSTHA, HINGANGHAT
VIDYA VIKAS ARTS, COMMERCE & SCIENCE COLLEGE
SAMUDRAPUR, DIST. WARDHA (MAHARASHTRA)



AFFILIATED TO R.T.M. NAGPUR UNIVERSITY

Organizing

“VUPTA STUDENT SEMINAR – 2022”

Date: 19th & 20th March 2022

Dear Sir / Students,

It gives me immense pleasure to inform you that **Vidya Vikas Arts, Commerce and Science college, Samudrapur** in association with **Vidarbha Universities Physics Teacher's Association (VUPTA)** organizes **VUPTA Students Seminar-2022 and Poster/Chart Competition in Physics** at **Vidya Vikas Arts, Commerce and Science College, Samudrapur District- Wardha 442305 (M.S.)** on **19th and 20th March 2022**. All B.Sc. and M.Sc. students of Physics and teachers of UG/PG colleges are cordially invited to participate in this event.

About College

About College: Vidya Vikas Arts, Commerce and Science College Samudrapur was established in 1989 by Vidya Vikas Shikshan Sanstha, Hinganghat with a prime objective of “Karmanya Vadhikaraste Mafaleshu Kadachan”. It is grant in aid college affiliated to Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur and is recognized as 2F and 12 B. College was first accredited by National Assessment and Accreditation Council (NAAC) In 2004 and re-accredited with a B grade in January 2015. With its complete a galaxy of faculty members, the college has been rendering sincere services for higher education since 1989. This is a three faculty College with a variety of courses both at 10+2 stage and degree level and also for PG courses with recognize Centre for Ph.D. in subject Marathi and Commerce.



Shri. Pandurangji Tulaskar
President
Vidya Vikas Education Society
Hinganghat



Dr. Umesh Tulaskar
Secretary
Vidya Vikas Education Society
Hinganghat



Dr. K. G. Rewatkar
Principal &
President of VUPTA



Dr. N. S. Shirbhate
Vice-Principal

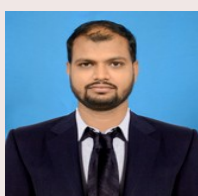
Organizing Committee



Dr. J. N. Ramteke
Secretary of VUPTA



Mr. S. R. Sarve
Organizing Secretary



Dr. N. D. Shambharkar
Coordinator



Dr. Sharad Kuhikar
PG Coordinator



Mr. Jitendra Tomar
Lecturer

Registration Link:

For Student – <https://forms.gle/beyBDHH9WFBLyS1TA>

For Teacher - <https://forms.gle/EQPCW5eAdzxueMAo9>

PROGRAM DETAILS

19/03/2022 (SATURDAY)

- Registration : 09:30 a.m. to 11.30 a.m.
- **Inaugration** : **11:30 p.m to 12:30 p.m.**
- Lunch : 12:30 p.m. to 01:30 p.m.
- **Screening Test** : **01:40 p.m. to 03:40 p.m.**
- Popular Talk : 04:00 p.m. to 05:30 p.m.
- **Elocution Competition** : **05:30 p.m. to 06:30 p.m.**
- Dinner : 07:15 p.m.
- Cultural Activity

20/03/2022 (SUNDAY)

- Tea and Breakfast : 08:30 a.m to 09:00 a.m.
- **Seminar Talk** : **09:00 a.m. to 01:00 Noon**
- Lunch : 01:00 p.m. to 02:30 p.m.
- **Valedictory function** : **02:30 p.m. to 03:30 p.m.**

RULES FOR SEMINAR COMPETITION

- Registration fees per student Rs. 300/-
- Registration fees per Teachers Rs. 450/-
- Each student is allowed to deliver a seminar talk for 7 minutes and 2 minutes will be given for question-answers.
- Judge's decision will be final.
- Travailing expenses are not admissible.
- Six participants will be allowed from each college.
- The students participation from M.Sc. (Physics) may prepare any topic of their choice.
- All the Colleges must confirm their participation by post or on telephone number given below on or before 15/03/2022

Bank Details:

Account Name : **Mr. PRINCIPAL VIDYA VIKAS COLL SEC**
Account Number : **00000011708589794**
IFSC Code : **SBIN0005445**
MICR Cide : **442002442**
CIF No. : **81401853202**
UPI ID : **VV11708589794@SBI**



FOR POSTERS/CHARTS

Topics for Posters

- i. Recent Development in Physics
 - ii. Impact of Physics on Science & Society
- ◆ Students should prepare a poster of Size (1m x 1m) clearly depicting their idea.
 - ◆ A team of two students will be allowed to present a poster.
 - ◆ Registration of all the students is mandatory.
 - ◆ A student presenting a poster will not be allowed to participate in seminar competition.
 - ◆ There is no restriction of number of participants for poster competition

TOPICS FOR VUPTA SEMINARS-2022

B. Sc. – SEM- II

1. Simple Harmonic Motion (Diff. Eqⁿ. and its solution)
2. Lissajous's Figures and their demonstration by C.R.O.
3. Forced oscillation (Diff. Eqⁿ. and its solution)
4. Estimation of molecular diameter and mean free path
5. Kepler's law's of planetary motion
6. Carnot's Heat Engine, its efficiency and Carnot's Theorems
7. Thermodynamic scales of temperature.
8. Joule-Thomson Porous plug experiments
9. Maxwell's general thermodynamic relationships and their applications
10. Bernoulli's theorem and its applications
11. Magnetic properties of materials (μ , B, H, χ etc.)
12. Magnetic Materials (Ferro, Ferri and Anti-ferromagnetic Materials)
13. Distance between planets by Parallax method
14. Gauss's law of magnetism
15. Transport Phenomenon in gases
16. Cathode Ray Oscilloscope (C.R.O.)
17. Cyclotron
18. Solar Cell

B. Sc. – SEM- IV

1. Crystal structures (Bravais lattice)
2. Crystal structures NaCl, Diamond and CsCl
3. X- Ray spectra
4. Applications of X- ray in various fields
5. Bragg's spectrometer and its application
6. Laue's theory of X- ray diffraction
7. Laser system and its applications
8. Raman effect
9. Rotational and vibrational spectra
10. Junction Field Effect Transistors (JFET)
11. MOSFETs
12. h- parameters and Equivalent circuits at low frequencies for CE-mode transistor
13. Diatomic molecules as a harmonic oscillator
14. Vector atom model
15. Distinction between MB, BE and FD statistics
16. Bias Stabilizing Circuits
17. NMR and ESR
18. Stern-Gerlach experiment
19. Solar Cell

B. Sc. – SEM- VI

1. Michelson and Morley experiment
2. Liquid drop model
3. G M counter
4. Nuclear fission
5. Lorentz transformation
6. Spectrophotometer
7. OP-AMP
8. Phase shift/ Hartley oscillator
9. De-Morgan's' theorem
10. Half adder and full adder
11. Amplitude Modulation
12. Frequency Modulations
13. Frequency Spectrum in FM
14. Propagation of Light through Optical fibers
15. Application of OPAMP as inverting amplifier
16. Action Potentials of The Human Body
17. Electroencephalogram (EEG)
18. Quantum Dots