# Value added course

## on

# Introduction to Practical physics

# Academic year 2021-22

**Course Co-ordinator**

**Proff. C S Munnolli**

**Dept of Physics**

## Introduction to Practical physics

It is now well accepted that the teaching and learning of physics at the university level is incomplete and inadequate, unless students gain direct and individual experience in experimental physics through laboratory courses. Therefore, at almost every college and university the world over, physics laboratory courses have been given an indispensable role in physics education in spite of consuming a lot of time and funding. The objectives and goals of physics laboratory courses have been evolving over the past century. A number of objectives and goals of physics laboratory training have been listed by researchers and teachers from all over the world.

Physics is concerned with the study of matter and energy in both the inanimate and animate worlds. Although experimentation is required in all branches of science, controlled laboratory experiments are especially important in physics. The primary goal of laboratory experiments in physics in general is to verify and validate physical phenomena concepts, principles, and hypotheses. This alone will not help students become independent thinkers or conduct independent research. As a result, laboratory work is highly valued and encouraged in a variety of ways. These may include not only conducting experiments but also investigating various aspects of conducting experiments. Many activities, as well as project work, will thus ensure that the students can construct and reconstruct. Ideas are based on firsthand experiences gained through laboratory research. Furthermore, through their environment, learners will be able to integrate experimental work with theory that they are studying at the higher secondary level. Many significant discoveries in science have been made while conducting experiments, according to the history of science. Experimental work is as important in the advancement of physics as theoretical understanding of a phenomenon. Experimenting with one's own hands in a laboratory is important because it creates a sense of direct involvement in the process of generating knowledge. Personal laboratory experiments and data analysis aid in the development of scientific temper, logical thinking, rational outlook, sense of self-confidence, ability to take initiative, objectivity,

and objectivity. Cooperation, patience,  self-reliance, perseverance,  and so on. Experimenting also improves manipulative, observational, and reporting skills.

**Objectives:**

It is often accepted that the laboratory courses are supposed to develop in students a variety of content, cognitive, psychomotor, procedural, attitudinal and affective abilities related to understanding and 'doing' physics. The objectives of physics laboratory education at the university level described more recently include the following:

a) Development of a better and long-lasting understanding of facts, concepts, principles and laws of physics;

b) Development of procedural understanding / abilities related to modelling, designing experiments, planning measurements / observations and analyzing data;

c) Development of experimental skills for the use, alignment and handling of a wide range of laboratory instruments and tools;

d) Fostering various cognitive abilities like hypothesizing, predicting, observing, classifying, interpreting and inferring;

e) Development of the ability to solve experimental problems on the basis of methods, processes and techniques commonly used in experimental physics;

f) Training in the handling of experimental data, making the students aware of the uncertainties involved in various measurements and development of abilities with respect to the treatment of data, error analysis and reporting of experimental activities;

g) Development of higher order abilities, such as careful and keen powers of observation, the ability to make accurate measurements, handle measured data for objective reasoning correctly, draw conclusions and make generalizations; h) development of interest, motivation, open-mindedness, creativity, curiosity, scientific thinking/attitude, self-activity and independent working habits;

i) Learning to work in team and collaborate among peers; and

j) Learn to communicate the observations and results.

The following sections discuss the main skills gained from physics practical work.

**Manipulative skills**

The learner develops manipulative skills in practical work if she/he is able to

(i) Comprehend the theory and objectives of the experiment

(ii) Conceive the procedure to perform the experiment

(iii) Set-up the apparatus in proper order

(iv) Check the suitability of the equipment, apparatus, tool regarding their working and functioning (v) know the limitations of measuring device and find its least count, error etc.

(vi) Handle the apparatus carefully and cautiously to avoid any damage to the instrument as well as any personal harm

(vii) Perform the experiment systematically

(viii) Make precise observations

(ix) Make proper substitution of data in formula, keeping proper units (SI) in mind (x) calculate the result accurately and express the same with appropriate significant figures, justified by the degree of accuracy of the instrument (xi) interpret the results, verify principles and draw conclusions

(xii) Improvise simple apparatus for further investigations by selecting appropriate equipment, apparatus, tools, materials

**Observation skill**

The learner develops observational skills in practical work if she/he is able to

(i) Read about instruments and measure physical quantities, keeping least count in mind

(ii) Follow the correct sequence while making observations

(iii) Take observations carefully in a systematic manner

(iv) Minimize some errors in measurement by repeating every observation independently a number of times.

**Drawing skill**

The learner develops drawing skills for recording observed data if she/he is able to

(i) Make schematic diagram of the apparatus

(ii) Draw ray diagrams, circuit diagrams correctly and label them

(iii) Depict the direction of force, tension, current, ray of light etc, by suitable lines and arrows

(iv) Plot the graphs correctly and neatly by choosing appropriate scale and using appropriate scale.


**Reporting skill**

The learner develops reporting skills for presentation of observation data in practical work if she/he is able to

(i)  Make a presentation of aim, apparatus, formula used, principle, observation table, calculations and result for the experiment

(ii) Support the presentation with labeled diagram using appropriate symbols for components

(iii) Record observations systematically and with appropriate units in a tabular form wherever desirable

(iv)  Follow sign conventions while recording measurements in experiments on ray optics

(v) Present the calculations/results for a given experiment along with proper significant figures, using appropriate symbols, units, degree of accuracy

(vi) Calculate error in the result

(vii) State limitations of the apparatus/devices

(viii) Summaries the findings to reject or accept a hypothesis

(ix) Interpret recorded data, observations or graphs to draw conclusion and

(x) Explore the scope of further investigation in the work performed. However, the most valued skills perhaps are those that pertain to the realm of creativity and investigation.

| Medium of instruction | English |
|---|---|
| Course structure and examination scheme | |
| Total contact hours | |
| Theory classes | 30 |
| Mode of examination | Offline (MCQ and descriptive) |
| Number of questions | 30 |
| Marks | 30 |
| Eligibility | Students enrolled in B.Sc |
| Number of seats | 50 |

**Syllabus**

| Unit 01 | | |
|---|---|---|
| Physical world and measurements | | |
| Physical world | Introduction to physics | (a)Physics scope and excitement<br><br>(b) Nature of physical laws<br><br>1. Definition |

|  |  | 2. Technology and society |
| --- | --- | --- |
| Units | Need for measurements | Units of measurement, System of units and S I units ,Fundamental and derived units, Length and mass and time measurements |
| Dimensions |  | Dimension of physical quantities, dimensional analysis and its application |

**Unit 02**

| Rigid bodies |  | Rotational motion about an axis. Angular momentum and rotational energy Circular ring and annular ring Theory of compound pendulum and Torsion pendulum |
| --- | --- | --- |
| Practical experiment | . | Bar pendulum v/s Time graph Torsion pendulum |

**Unit03**

|  |  | Position-time graph |
| --- | --- | --- |

| Frames of reference | Motion in St-line | Speed and velocity |
| --- | --- | --- |
| | | Elementary concept of differential and integration for describing motion |
| | | Acceleration and relation with accelerated motion |
| **Unit 4** | | |
| Elasticity | | Modulii of elasticity for isotropic materials |
| | | Relation between elastic constant |
| | | Poisons ratio, Bending of beam |
| | | Expression for couple for twist |
| | | Girders |
| **Unit 5** | | |
| Experiments | | 1. Spiral spring |
| | | 2. M I of fly wheel |
| | | 3. M. I of irregular body |
| | | 4. Verification of parallel axis theorem |
| | | 5. Verification of Hooks law |

**References**

- ❖ 1.Experimental; physics : M A Hippargi
- ❖ 2. Experimental Phyiscs : Gadad and Hiregoudar
- ❖ 3.Practical Physics : C L arora
- ❖ 4. Advanced Practical physics : Worsnop and Flint
- ❖ 5. Practical Physics : Gupta and Kumar Vol I and Vol-II

1. Only force acting on a bouncing ball is

A. gravity

B. weight of ball

C. friction

D. a and b both

**2.** Accelerometer detects the

A. small acceleration

B. large acceleration

C. small deceleration

D. large acceleration and deceleration

**3:** If the gradient of a graph is negative, then the acceleration is

A. positive

B. negative

C. zero

D. 1

 **4:** If a student drops a stone from a cliff of height 30 m and the time it

takes to reach the ground is 2.6 s, then the acceleration due to gravity is

A. 9 m s-2

B. 10 m s-2

C. 4 m s-2

D. 8.8 m s-2

**5:** Gradient of line of velocity-time graph is tells us the

A. velocity

B. acceleration

C. distance

D. time

**6:** A stone is thrown upwards with initial velocity of 20 m s-1, the height

that stone will reach would be

A. 20 m

B. 30 m

C. 40 m

D. 50 m

**7:** Projectile will attain its maximum range, if it is fired at an angle of

A. 30°

B. 47°

C. 90°

D. 45°

**8:** Horizontal component of a bouncing ball is

A. affected by gravity

B. unaffected by gravity

C. affected by weight

D. affected by contact force

**9:** When ball having a projectile motion is rising up, it

A. decelerates

B. accelerates

C. rises up with constant acceleration

D. acceleration becomes zero

**10:** Equation of motion can be used for

A. straight line motion only

B. curved motion only

C. motion along the circular path

D. all types of motion

**11:** Acceleration of free fall depends on the

A. surface

B. weight of object

C. distance from center of Earth

D. size of object

**12:** If initial velocity of an object is zero, then distance covered by it in time t and acceleration of 9.8 m s-2 would be

A. 2.9 t2

B. 3 t2

C. 4 t2

D. 4.9 t2

**13:** As the ball falls towards the ground, its velocity

A. increases

B. decreases

C. remains constant

D. becomes zero

**14:** Gradient of velocity-time graph tells us about object's

A. velocity

B. displacement

C. distance

D. acceleration

**15:** An object whose velocity is changing is said to be in a state of

A. acceleration

B. rest

C. equilibrium

D. Brownian motion

**16:** Acceleration of train when it is moving steadily from 4.0 m s-1 to 20 m s-1 in 100 s is

A. 1 m s-2

B. 2 m s-2

C. 0.16 m s-2

D. 3 m s-2

**17:** If we get a straight line with positive slope then its acceleration is

A. increasing

B. decreasing

C. zero

D. constant

**18:** If a spinster staring from rest has acceleration of 5 m s-2 during 1st 2.0 s of race then her velocity after 2 s is

A. 20 m s-1

B. 10 m s-1

C. 15 m s-1

D. 5 m s-1

**19:** Horizontal distance travelled by a ball if it's thrown with initial velocity of 20 m s-1 at an angle of 30° is

A. 24 m

B. 56 m

C. 35.3 m

D. 36.3 m

**20:** If a car starting from rest reaches a velocity of 18 m s-1 after 6.0 s then its acceleration is

A. 1 m s-2

B. 2 m s-2

C. 3 m s-2

D. 4 m s-2

**21:** A train travelling at 20 m s-1 accelerates at 0.5 m s-2 for 30 s, the distance travelled by train is

A. 825 m

B. 700 m

C. 650 m

D. 600 m

**22:** Area under velocity-time graph tells us the

A. time

B. acceleration
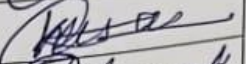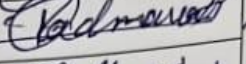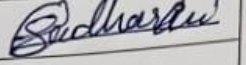
C. displacement

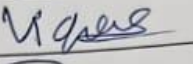D. velocity

## H.K.E.SOCIETYS
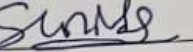
## A. V. PATIL DEGREE COLLEGE OF ARTS, SCIENCE AND COMMERCE, ALAND

**Add-on Course on Introduction to Practical physics Enrolment List**

| SL.No | NAME OF THE STUDENT | Class | Signature |
|---|---|---|---|
| 1 | Parvin Bhasha | B.sc 1$^{st}$ sem | |
| 2 | Nagesh Pandit | B.sc 1$^{st}$ sem | |
| 3 | Bhagyashree Gunderao | B.sc 1$^{st}$ sem | |
| 4 | Amit Vishwanath | B.sc 1$^{st}$ sem | |
| 5 | Afreen Begum | B.sc 1$^{st}$ sem | |
| 6 | Sonubai Shasharao | B.sc 1$^{st}$ sem | |
| 7 | Sachin Sidam | B.sc 1$^{st}$ sem | |
| 8 | Kashinath Basavaraj | B.sc 1$^{st}$ sem | |
| 9 | Irfan Ahmed | B.sc 1$^{st}$ sem | |
| 10 | Kaveri Hanamantrao | B.sc 1$^{st}$ sem | |
| 11 | Mahesh Chandrakant | B.sc 1$^{st}$ sem | |
| 12 | Avinash Dilip | B.sc 1$^{st}$ sem | |
| 13 | Ambika Dayanand | B.sc 1$^{st}$ sem | |
| 14 | Sumit Sidramappa | B.sc 1$^{st}$ sem | |
| 15 | Laxman Mallappa | B.sc 1$^{st}$ sem | |
| 16 | Mahendra Rajendra | B.sc 1$^{st}$ sem | |

| 17 | Neelambika sidramappa | B.sc 1st sem | |
|---|---|---|---|
| 18 | Rajeshwar Sharanappa | B.sc 1st sem | |
| 19 | Shreemant Ramesh | B.sc 1st sem | |
| 20 | Ganesh Pandit | B.sc 1st sem | |
| 21 | Chetan Sidramappa | B.sc 1st sem | |
| 22 | Katambale Shruti | B.sc 1st sem | |
| 23 | Aishwarya Digmbar | B.sc 3rd Sem | |
| 24 | Archana Suryakant | B.sc 3rd Sem | |
| 25 | Bangaremma Shivaray | B.sc 3rd Sem | |
| 26 | Bagesh Moula | B.sc 3rd Sem | |
| 27 | Jyoti Dattappa | B.sc 3rd Sem | |
| 28 | Nagaraj Mallinath | B.sc 3rd Sem | |
| 29 | Priti Laxmikant | B.sc 3rd Sem | |
| 30 | Patl Mujajaffar | B.sc 3rd Sem | |
| 31 | Patel Amirabi | B.sc 3rd Sem | |
| 32 | Prashant Somanath | B.sc 3rd Sem | |
| 33 | Shridhar Beerappa | B.sc 3rd Sem | |
| 34 | Siddaroodh Hanamant | B.sc 3rd Sem | |
| 35 | Shivaprasad kupendra | B.sc 3rd Sem | |
| 36 | Zohra Noorain | B.sc 3rd Sem | |
| 37 | Shreeshail Somanna | B.sc 3rd Sem | |
| 38 | Asharani Shankar | B.sc 3rd Sem | |
| 39 | Bhuvaneshwari Anand | B.sc 3rd Sem | |
| 40 | Gulafshan Begum | B.sc 3rd Sem | |
| 41 | Annarao Shrishail | B.sc 5th Sem | |
| 42 | Abhishek Jali | B.sc 5th Sem | |
| 43 | Girirj Sharanabasappa | B.sc 5th Sem | |

| 44 | Kailash Shivappa | B.sc 5th Sem | |
|----|------------------|--------------|---|
| 45 | Karabasappa Shivalingappa | B.sc 5th Sem | |
| 46 | Padmavati Mahaveer | B.sc 5th Sem | |
| 47 | Sudharani Gundappa | B.sc 5th Sem | |
| 48 | Viquar Ahmed | B.sc 5th Sem | |
| 49 | Zaiba Safiya | B.sc 5th Sem | |
| 50 | Sunil Babu | B.sc 5th Sem | |

| NAME OF THE STUDENT | fedfnkl | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20/2 | 21/2 | 23 | 28 | 28 | 30 | 01/10 | 13 | 15 | 20 | 25 | 27 | 21 | 4 | 9 | 10 | 15 | 23 | 30 | 06/11 | 8 | 13 | 15 | 20 | 22 | 27 | 29 | 03/12 | 05/12 |
| Parvin Bhasha | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 06 | 21 | 22 | 23 | 24 | 25 | 26 | | | |
| Nagesh Pandit | 1 | . | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | | | |
| Bhagyashree Gunderao | 1 | . | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | | | |
| Amit Vishwanath | 1 | 2 | 3 | . | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | | | | |
| Afreen Begum | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | | | |
| Sonubai Shasharao | 1 | . | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| Sachin Sidam | 1 | . | 2 | 3 | 4 | | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | | |
| Kashinath Basavaraj | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | | |
| Irfan Ahmed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 26 | 27 | |
| Kaveri Hanamantrao | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | | | |
| Mahesh Chandrakant | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | | |
| Avinash Dilip | 1 | . | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | | |
| Ambika Dayanand | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | | |

Attendance register (dates across top, handwritten):

Header dates: 20|10, 21, 23, 25, 28, 30, 01|11, 13, 15, 18, 20, 25, 27, 28|11, 4, 6, 9, 11, 13, 15, 23, 30, 00|12, 8, 13, 15, 20, 21, 27, 29, 03|12, 05|12

| Name | Attendance counts |
|---|---|
| Sumit Sidramappa | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 . 19 20 21 22 23 24 |
| Laxman Mallappa | 1 2 3 4 5 . 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 |
| Mahendra Rajendra | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 |
| Neelambika sidramappa | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 |
| Rajeshwar Sharanappa | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 |
| Shreemant Ramesh | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 |
| Ganesh Pandit | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 |
| Chetan Sidramappa | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 |
| Katambale Shruti | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 |
| Aishwarya Digmbar | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 |
| Archana Suryakant | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 |
| Bangaremma Shivaray | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 |
| Bagesh Moula | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 |
| Jyoti Dattappa | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 25 25 26 |
| Nagaraj Mallinath | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 |
| Priti Laxmikant | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 |

| Date | 20/6 | 21 | 23 | 2x | 30 | 04/7 | 06 | 13 | 18 | 20 | 25 | 25 | 2/6 | 4 | 9 | 16 | 18 | 23 | 30 | 04/1 | 8 | 13 | 15 | 30 | 22 | 27 | 29 | 03/2 | 05/2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Shivalingappa | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | | |
| Padmavati Mahaveer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | | |
| Sudharani Gundappa | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | | |
| Viquar Ahmed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | | |
| Zaiba Safiya | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | | |
| Sunil Babu | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | | | | |

### Marks List

| S. NO | Name | Marks | S. NO | Name | Marks |
|---|---|---|---|---|---|
| 1 | Parvin Bhasha | 18 | 26 | Bagesh Moula | 17 |
| 2 | Nagesh Pandit | 16 | 27 | Jyoti Dattappa | 15 |
| 3 | Bhagyashree Gunderao | 22 | 28 | Nagaraj Mallinath | 25 |
| 4 | Amit Vishwanath | 16 | 29 | Priti Laxmikant | 26 |
| 5 | Afreen Begum | 21 | 30 | Patl Mujajaffar | 09 |
| 6 | Sonubai Shasharao | 18 | 31 | Patel Amirabi | 23 |
| 7 | Sachin Sidam | 22 | 32 | Prashant Somanath | 21 |
| 8 | Kashinath Basavaraj | 18 | 33 | Shridhar Beerappa | 27 |
| 9 | Irfan Ahmed | 15 | 34 | Siddaroodh Hanamant | 12 |
| 10 | Kaveri Hanamantrao | 22 | 35 | Shivaprasad kupendra | 17 |
| 11 | Mahesh Chandrakant | 25 | 36 | Zohra Noorain | 29 |
| 12 | Avinash Dilip | 22 | 37 | Shreeshail Somanna | 20 |

| 13 | Ambika Dayanand | 12 | 38 | Asharani Shankar | 22 |
|----|----|----|----|----|----|
| 14 | Sumit Sidramappa | 11 | 39 | Bhuvaneshwari Anand | 25 |
| 15 | Laxman Mallappa | 22 | 40 | Gulafshan Begum | 27 |
| 16 | Mahendra Rajendra | 22 | 41 | Annarao Shrishail | 22 |
| 17 | Neelambika sidramappa | 19 | 42 | Abhishek Jali | 25 |
| 18 | Rajeshwar Sharanappa | 11 | 43 | Girirj Sharanabasappa | 10 |
| 19 | Shreemant Ramesh | 22 | 44 | Kailash Shivappa | 19 |
| 20 | Ganesh Pandit | 11 | 45 | Karabasappa Shivalingappa | 28 |
| 21 | Chetan Sidramappa | 25 | 46 | Padmavati Mahaveer | 28 |
| 22 | Katambale Shruti | 29 | 47 | Sudharani Gundappa | 27 |
| 23 | Aishwarya Digmbar | 15 | 48 | Viquar Ahmed | 28 |
| 24 | Archana Suryakant | 11 | 49 | Zaiba Safiya | 26 |
| 25 | Bangaremma Shivaray | 13 | 50 | Sunil Babu | 12 |

# H.K.E.SOCIETYS

## A. V. PATIL DEGREE COLLEGE OF ARTS, SCIENCE AND COMMERCE, ALAND

**Add-on Course on Practical physics**

**Time-Table (2021-22)**

| Sl No | Day | Time | Remarks |
|-------|-----|------|---------|
| 01 | Thursday | 2.30-3.30 | |
| 02 | Saturday | 3.30-4.30 | |

**Meeting Minutes for Institutional Board of Studies for Add-on Course on Introduction to Practical physics held on (please add date)**

The institutional Board of Studies of the Dept of Physics for the add-on course on Introduction to **Practical physics** held on (08/10/2021) in  IQAC Room at 10:30 am.

HKE's/AVPASCC/VAC/SCI/2021-22

Date: 08/10/2021

| Sl No. | Name | Institute | Role |
|---|---|---|---|
| 1 | **Prof. Sharanbasappa  Kammar** <br> **Asst professor** <br> **Dept of  English** | **A .V Patil Degree college** | **Course co-ordinator** |
| 2 | **Prof. Ramesh Masarbo** <br> **Asst prof and IQAC Co-ordinator** | **A .V Patil Degree college** | **Member** |
| 3 | **Dr. Shanatala D Patil** <br> **Asst professor** <br> **Dept of  Physics** | **GFGC Aland** | **External member** |
| 4 | **Prof. C. S Munnolli** <br> **Guest faculty** <br> **Dept of  Physics** | **A .V Patil Degree college** | **Internal member** |

In the beginning of the meeting the Chairman of the BOS :**S S Kammar**  welcomed all members and briefed them about the academic activities of the Spoken English Course. The members expressed their highly appreciation and satisfaction about the activities of the department.

After that institutional BOS discussed and resolved the following items:

**Item 1. Starting of the add-on course on Introduction to Practical physics**

The BOS discussed the item and resolved to start the add-on course on Introduction to **Practical physics.**

**Item 2. Approval of the Syllabus for add-on course.**

The BOS discussed and approved the syllabus for the add-on course on Introduction to **Practical physics Item 3. Approval of admission criteria**

The BOS discussed and approve the criteria for admission and resolved that any students enrolled in UG course can enrol in this course. In addition to this BOS also finalized the exam pattern.

Meeting of the BOS was concluded with the vote of thanks by Prof. S S Kammar Assistant Professor in Department of Physics

The following members were present in the meeting:
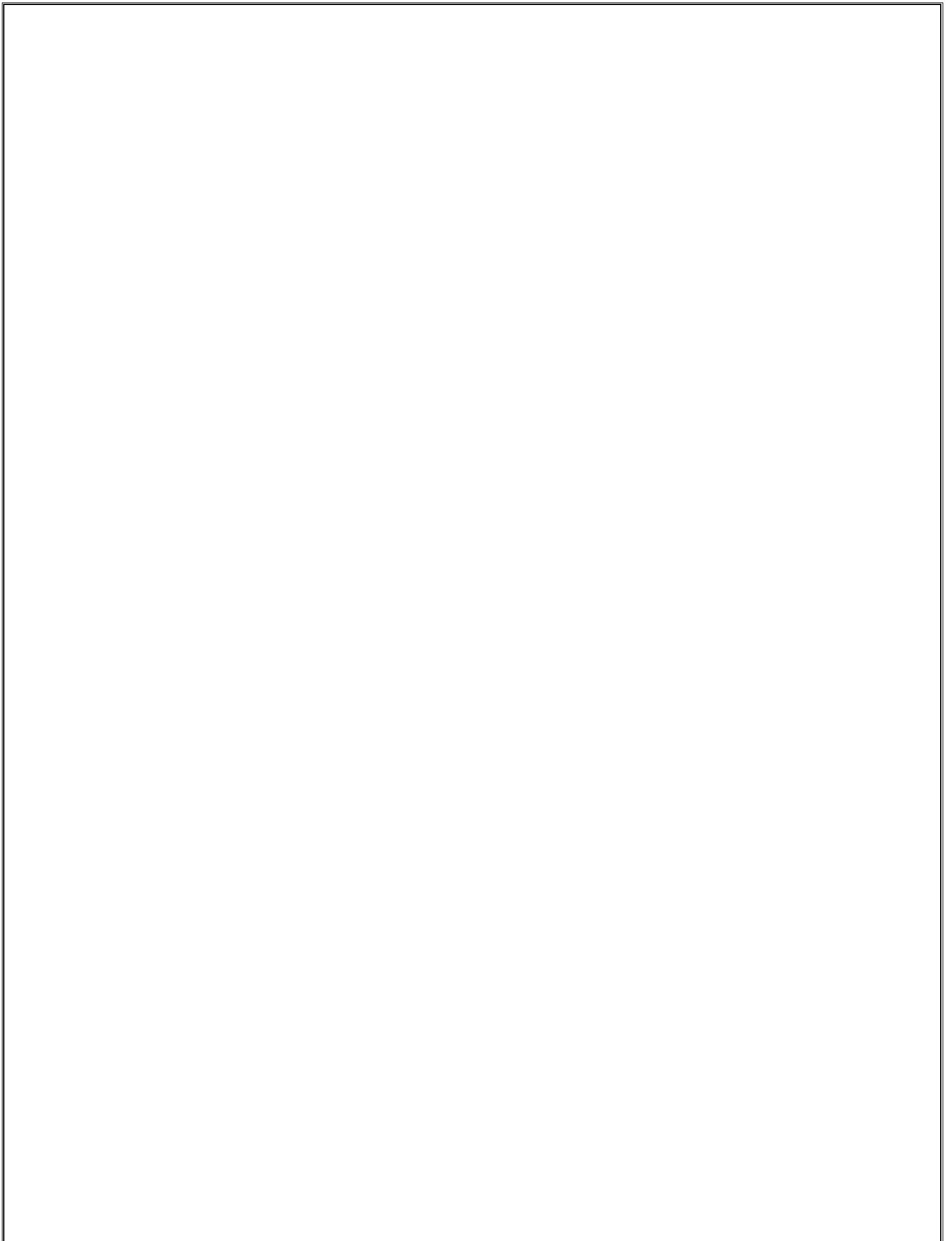
| Name of the Member of BOS | Signature |
|---|---|
| 1. Prof. Sharanbasappa S Kammar | |
| 2. Dr. Ramesh Masarbo | |
| 3. Dr. Shanatala D Patil | |
| 4. Prof. C. S Munnolli | |

To,

Date: 12 /10/2021

The Principal

**Sub:** Request to grant permission to start add-on course on Introduction to **Practical physics** from the academic year 2021-22: Reg.

Respected Sir,

We would like to start the add-on course on "Introduction to **Practical physics**" from the academic year 2021-22: with intake of 50 students. Please permit us to start the add-on course and do the needful.

Thanking You.

HOD
HEAD
DEPT. OF PHYSICS
A.V. Patil Degree College
ALAND

Date: 14/10/2021

## NOTICE

All the students are hereby informed that, the Department of Physics add on **Practical physics course** from the **(20/10/2021)**, interested students can enrol their names on or before **(18/10/2021)** in the Department of Physics.

**HOD**

HEAD
DEPT. OF PHYSICS
A.V. Patil Degree College
ALAND

Principal

PRINCIPAL
H.K.E. Society's A.V. Patil Degree
College, ALAND-585302

**Date: 28/1/2022**

## NOTICE

All the students enrolled in add-on course on Introduction to **Practical physics** are hereby informed that, the course examination is scheduled on (08/02/2022)

**HOD**

HEAD
DEPT. OF PHYSICS
ES's A.V. Patil Degree College
ALAND

PRINCIPAL
H.K.E. Society's A.V. Patil Degree
College, ALAND-585302

## Report and Outcome Analysis

**Name of the Course : Practical physics Course**

**Name of the Department : Physics**

**Number of Student Enrolled :50**

**BOS Meeting Date: 08/10/2021**

**Start Date of the Course:  20/10/2021**

**End Date of the Course: 05/02/2022**

The Department of Physics have conducted add-on course on **Introduction to Practical physics** for the students of B.Sc from **20/10/2021 t**o **01/02/2022**.

The course was about to enable students and making them ready to face the present world professionally.

The total **50** students were enrolled in this course and they got fundamental knowledge of about communication. Students also applied these skills and concepts during the assignments.

Concourse concluded with final examination and certificate distributions.

**Outcome of the Course**

- The course was about the Develop analytical skill set through case study course objectives

- Involve students in practical activity oriented class rather than traditional study method

- Understand what are the core competencies to succeed in your professional and personal life

- Reduce English phobia by "learning by doing" technique course objectives

- Understanding inter-personal skills & the steps required to be taken to improve these

  .

H.K.E.Society's

# A.V. PATIL ARTS, SCIENCE & COMMERCE COLLEGE

ALAND Dist. Kalaburagi, Karnataka - 585 302

## CERTIFICATE

This is to Certify that .....Priti. Laximikant.....

of....B.sc.-III.......... Semester for the year ....2021-22....

has successfully completed the value added course in

....Poractical Physics.... we wish him/her for future endeavours

**Isaac** Co-Ordinator

Head of Dept.

Principal

CERTIFICATE

H.K.E.Society's

# A.V. PATIL ARTS, SCIENCE & COMMERCE COLLEGE

ALAND Dist. Kalaburagi, Karnataka - 585 302

## CERTIFICATE

This is to Certify that ...Zaiba Safiya...

of ...B.sc-I^{th}... Semester for the year ...2021-22...

has successfully completed the value added course in

...Practical Physics... we wish him/her for future endeavours

IQAC Co-Ordinator

Head of Dept.

Principal

CERTIFICATE

H.K.E.Society's

# A. V. PATIL ARTS, SCIENCE & COMMERCE COLLEGE

ALAND Dist. Kalaburagi, Karnataka - 585 302

## CERTIFICATE

This is to Certify that ........ Afreen Begum ........

of. .... Bsc-I st ........ Semester for the year ..... 2021-22 ....

has successfully completed the value added course in

...... Practical Physics ...... we wish him/her for future endeavours

IQAC Co-Ordinator

Head of Dept.

Principal