

To  
The Board of Studies,  
S.D.Mahila Mahavidyalya,  
Narwana.

**Sub: Approval for "Basic Components of Physics" Certificate course..**

Respected Madam,

We want to start a certified offline course "**Basic Components of Physics**"(30 Hours) in our campus. A Certificate is an education goal for many students who want to improve their visibility among aggressive job applications. Certificates may help to provide students with increased skills and experience. Syllabus of "**Basic Components of Physics**" is attached with this application. Please kindly approve this certified course. We shall be thankful to you for this.

Enclosed: Syllabus of the Certificate Course.

Yours Faithfully

Ms.Nisha  
Asstt. Prof. of Physics

*Nisha*  
Officiating Principal  
S.D. Mahila Mahavidyalya  
NARWANA  
*N*

## **Skill oriented course**

### **Syllabus**

**Topic = Basic component of Physics**

#### 1. Introduction

##### 1.1 Basic Components

- Transistor
- Diode
- Resistor
- LED
- Potentiometer
- Relay
- Capacitor
- Inductor.
- PCB
- Bread board

#### 2. Use of Multimeter

#### 3. How to make an electric extension board

#### 4. How to repair water pump in an electric cooler.

#### 5. How to use soldering iron

#### 6. How to make COB LED (Chip ON Board)

#### 7. Uses and applications of Basic components.

## Theory

M.M-20

Time - 1:00 hour

Note:- Paper Setter will set 5 question in all. Question No. 1 Comprising of 4 short types Questions carrying 1 Marks each is compulsory. It Covers the entire syllabus. Candidate is required to attempt all questions carrying 4 marks each.

## "Practicals"

MM-20

Time- 1:00 hour

Note-Do any one experiment (Program) from the five (Program)

\* The Practical examination will be held in a Single Session of 1 hour.

Distribution of Marks:

Experiments- 15 marks

Viva Voice- 05 marks

Total- 20 marks

Ms. Nisha  
Asst. Prof. of Physics

Ms. Mahak  
Asst. Prof. of Physics

Subject: Approval for "**Basic Components of Physics**" by the Board of Studies

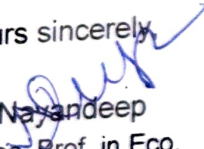
Dear Ms. Nisha & Mahak,


I am pleased to inform you that after careful consideration and review by the Board of Studies, has approved "**Basic Components of Physics**" which spans over 30+ hours of instruction.


This course has been evaluated thoroughly to ensure its alignment with our institution's academic standards and objectives. We believe that it will significantly contribute to the academic enrichment of our students and align with our commitment to providing high-quality education.

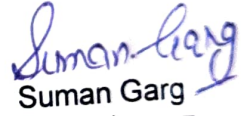
Thank you for your interest and support in our academic endeavors.

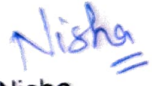
Yours sincerely,


  
Dr. Nayanadeep  
Assoc. Prof. in Eco.  
Convener

  
Dr. Anita Chabra  
Asst. Prof. in Hindi  
Member

  
Dr. Shalu Sachdeva  
Asst. Prof. in Hist.  
Member

  
Suman Garg  
Asst. Prof. in Eng.  
Member

  
Nisha  
Asst. Prof. in Physics  
Member

  
Officiating Principal  
S.D. Mahila Mahavidyalaya  
NARWANA



Ph. No. 01684-240161



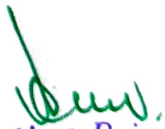
**S D MAHILA MAHAVIDYALYA**  
**NARWANA-126116 ( JIND ) HARYANA**

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Dated:-...28/09/2022

**Notice**

बी एस सी द्वितीय वर्ष की सभी छात्राओं को सूचित किया जाता है कि 01 अक्टूबर 2022 से महाविद्यालय में Basic Component of physics पर 30 घंटे का सर्टिफिकेट कोर्स करवाया जाएगा और कोर्स के अंत में परीक्षा ली जाएगी और छात्राओं को प्रमाण पत्र दिए जाएंगे।

  
Officiating Principal  
S.D. Mahila Mahavidyalaya  
NARWANA





**S.D MAHILA MAHAVIDYALAYA NARWANA**



## **DEPARTMENT OF SCIENCE**

**PROUDLY OFFERS**

# **ADD ON CERTIFICATE COURSE IN BASIC COMPONENTS OF PHYSICS**

**STARTING FROM 1 OCTOBER 2022**

**DURATION - 30 HOURS**

**MODE- OFFLINE**

**The primary objective of the "Fundamentals of Physics: Exploring Basic Components" certificate course is to provide BSc students with a comprehensive understanding of essential concepts in physics and their applications. By the end of the course, students should be able to:**

**Understand Fundamental Principles**

**Apply Physical Laws**

**Analyze Systems**

**Perform Laboratory Experiments**

**Demonstrate Problem-Solving Skills**

**MS. NISHA  
CONVENOR**

**MS. MAHAK  
CO-CONVENOR**

**DR. ANJANA LOHAN  
PRINCIPAL**

Skill oriented course on Basic component of Physics  
 S.D. Mahila Mahavidyalaya, Narwana

Participant Attendance Sheet :- (H.S. 1<sup>st</sup> year).....  
 from 01/10/2022 to 19/11/2022

Session.....2022-2023.....

Sr.No.	Name	Roll No.	October																			November																			Total	Signature					
			01	03	05	06	07	08	10	11	12	14	15	17	19	20	21	27	28	29	31	04	07	11	12	14	15	16	17	18	19																
1	Menka	1211913015001	P	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26	menka				
2	Anu	02	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	Anu			
3	Kisanpal	03	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	20	Kisanpal		
4	Sejal	04	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	20	Sejal		
5	Ashju	06	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28	Ashju		
6	Pooja	07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	Pooja		
7	Kajal	08	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26	Kajal		
8	Nancy Rani	09	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	Nancy Rani		
9	Nishu	10	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	Nishu		
10	Kusum	11	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28	Kusum	
11	Manitu	12	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	Manitu	
12	Komal	13	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26	Komal	
13	Shalu Devi	14	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	27	Shalu Devi
14	Priyanka	15	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	27	Priyanka
15	Aarti	16	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	Aarti
16	Raman Desh	18	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28	Raman Desh
17	Komal	19	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	24	Komal
18	Nimmi	20	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	27	Nimmi
19	Anchal	21	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	Anchal
20	Priya	23	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	Priya
21	Tamanna	24	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	Tamanna
22	Piti Devi	25	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	21	Piti Devi
23	Loyal	28	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	Loyal
24	Sakshi	29	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	Sakshi
25	Priya	30	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	Priya
26	Anshu	31	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	27	Anshu
27	Anjali	32	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26	Anjali
28	Anjali	33	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	27	Anjali
29	Swati	35	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26	Swati
30	Anjali Sharma	36	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	Anjali Sharma
31	Sakshi	38	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	Sakshi
32	Manju Devi	39	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28	Manju Devi
33	Neha	40	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	Neha
34	Minakshi	41	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28	Minakshi



GPS Map Camera

Narwana, Haryana, India  
H4V5+JG7, Bir Bal Nagar, Narwana, Narwana Rural, Haryana 126116, India  
Lat 29.59414°  
Long 76.109174°  
07/10/22 12:12 PM GMT +05:30

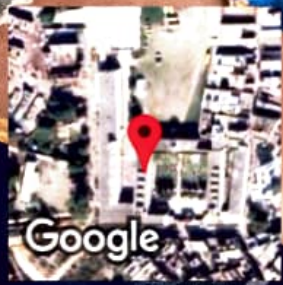






GPS Map Camera

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Google



 GPS Map Camera

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Long 76.109174°  
07/10/22 12:12 PM GMT +05:30



Google

**Skill oriented certificate course**

**Topic - Basic components of physics**

Session - 2022-2023.

M.M= 20.

Time = 1 hour

All candidates are required to attempt any four questions from Question 2 to Question 6. Question 1 is compulsory.

Ques 1. (a) What is resistor?

(b) Why we use soldering iron machine?

(c) What is diode?

(d) What is transistor?  $4 \times 1 = 4$

Ques 2. What is bread board? How many parts are there in bread board?

Ques 3. What is PCB? What are three types of circuit board?

Ques 4. Write the name of 8 basic electronic components with symbol?

Ques 5. Explain the uses of basic electronic components.

Ques 6. (a) Define the LED with its full form

(b) Explain inductor and capacitor with its symbols.  $4 \times 4 = 16$

# S.D. MAHILA MAHAVIDYALYA, NARWARA

Session - 2022-23

Roll No. 1811913015007 Class B.Sc. IT <sup>nd</sup> Sec. .... Subject Physics .....

Date ..... Signature Roopa .....

Que 1. (a)

Ans: - Resistor  $\Rightarrow$  Resistor is defined as the device that does not allow electric current to "flow through" it freely in a circuit are called resistors.

(b) Ans: - This is a process where solder a fusible metal alloy typically a wire is heated to a high temperature with the tip of the ~~soldering~~ iron. when this solder cools and hardens, it acts in much the same way as glue.

(c) Ans: - Diode  $\Rightarrow$  Diodes are made from a semiconductor, most often silicon but sometimes germanium. It allows current to flow easily in one direction, but severely restricts current flowing in the opposite direction.

(d) Ans: - Transistor  $\Rightarrow$  A transistor is a type of semiconductor device that can be used to conduct and insulate electric current or voltage. A transistor basically acts as a switch and an amplifier.

18/90

Nishu

Signature Roopa .....

# S.D. MAHILA MAHVIDYALYA, NARWANA

Session - 2022-23

Roll No. 1811913015014 Class B.Sc. II<sup>nd</sup> year Sec. .... Subject Physics .....

Date .....

Signature Shalini .....

## Basic Component of Physics

18/80 ✓ N.S.M

Ques 1

(a) Resistor :-

Resistor may be defined as a device that does not allow current to flow through it freely in a circuit, this is known as "resistor"

(b) Soldering irons heat the solder, causing the alloy to melt, which then seals and joins two pieces of metals to each other when this solder seals and hardens, it acts in much the same way as glue

(c) A diode is a semiconductor device that essentially acts as a one way switch for current. It allows current to flow easily in one direction, but severely restricts current from flowing in the opposite direction.

(d) Transistor :-

A transistor is a semiconductor device used to amplify and switch electrical

# Result of Certificate Course

Class- B.Sc II<sup>nd</sup> year

Session- 2022-2023

Topic- Basic Components of Physics

10)

S.No.	Roll No.	Name	Theory (20)	Practical (20)	Total (40)
1.	1211913015001	Menka	15	15	30
2.	1211913015002	Anu	14	12	26
3.	1211913015003	Kiranpal	11	14	25
4.	1211913015004	Sejal	10	15	25
5.	1211913015006	Anju	17	13	30
6.	1211913015007	Pooja	18	16	34
7.	1211913015008	Kajal	16	17	33
8.	1211913015009	Nancy	19	16	35
9.	1211913015010	Nishu	16	18	34
10.	1211913015011	Kusum	15	17	32
11.	1211913015012	Manitu	15	15	30
12.	1211913015013	Komal	14	13	27
13.	1211913015014	Shalu Devi	18	18	36
14.	1211913015015	Priyanka	16	14	30
15.	1211913015016	Aariti	13	16	29
16.	1211913015018	Raman Devi	15	14	29
17.	1211913015019	Komal	18	18	36
18.	1211913015020	Nimmy	16	16	32
19.	1211913015021	Anchal	14	16	30
20.	1211913015023	Priya	18	18	36
21.	1211913015024	Tamanna	17	17	34
22.	1211913015025	Priti Devi	11	17	30
23.	1211913015028	Payal	12	16	31
24.	1211913015029	Sahshi	17	15	31
25.	1211913015030	Priya	18	19	36

S.No.	Roll No.	Name	Theory (20)	Practical (20)	Total (40)
26.	1211913015031	Anju	18	17	35
27.	1211913015032	Anjali	17	17	34
28.	1211913015033	Anjali	14	15	29
29.	1211913015035	Swati	15	15	30
30.	1211913015036	Anjali Sharma	16	14	30
31.	1211913015038	Sakshi	14	14	28
32.	1211913015039	Manju Devi	15	14	29
33.	1211913015040	Neha	17	18	35
34.	1211913015041	Minakshi	19	17	36

## Overview

### Skill Oriented Course on Basic component of Physics Session:- 2022-23

The Certificate Course on Basic Component of physics Offered by the Department of Physics, Mrs. Nisha S.D.MM.V Narwana has conducted from 01 October,2022 to 19 November, 2022 with a batch of 34 students and 34 Students sucessfully completed the course. The students gain knowledge for transistor, LED; Breadboard, Multimeter, Capcitor etc. During this certificate Course Mrs Nisha and Mahima gave the mechanical skill like, How to make an electric extension board, Repairing af Water pump in an electric cooler, soldering iron, How to make COB LED.

Principal Dr Anjana Lohan, Dr Nayandeep, Dr Shalu Sachdeva,Poonam, Seema, Mahima were present at this event.

#### Learning outcomes

- \*. Gain knowledge of Basic Component of Physics.
- \*. Operate soldering iron, Multimeter
- \*. Develop mechanical skill.
- \*. How to make an extension board.
- \*. Knowledge to repair water pump in an electric cooler.
- \*. How to make COB LED
- \*. Learning how to repair Physics practical apparatus.

All students successfully completed this Course. By gaining knowledge of this course, me they become self independent and will start their own Start up in future to make earning.



## S D Mahila Mahavidyalya, Narwana

### Student Feedback Performa

Name	Shobha Devi			
Class	B.Sc II <sup>nd</sup> year			
Roll Number	1211913015814			
Email Address				
Session	2022-2023			
Phone No.				
	Excellent	Very Good	Good	Average
The content was easy to understand.	✓			
It was well organised.		✓		
It engaged the participants in learning.	✓			
The Teacher was able to explain the activity.			✓	
The level of communication of teacher with students				✓
The event made progress in accomplishing its goal.		✓		
I found this event experience to be worthwhile.				

**Suggestion** महाविद्यालय में शुरू किया गया कोर्स अत्यंत प्रेरणादायक था। इससे हमें अत्यंत चीजें सीखने को मिली। भविष्य में इस प्रकार के कोर्स लगातार शुरू करवाने चाहिए।

Shobha  
Signature

Date

**S D Mahila Mahavidyalya, Narwana**  
**Student Feedback Performa**

Name	Neha			
Class	B.Sc II <sup>nd</sup> year			
Roll Number	1211913015840			
Email Address				
Session	2022-2023			
Phone No.				
	Excellen nt	Very Good	Good	Average
The content was easy to understand.	✓			
It was well organised.	✓			
It engaged the participants in learning.		✓		
The Teacher was able to explain the activity.			✓	
The level of communication of teacher with students				✓
The event made progress in accomplishing its goal.			✓	
I found this event experience to be worthwhile.				✓
<b>Suggesion</b>	महाविद्यालय में आयोजित किया गया कोर्स अत्यंत प्रेरणादायक था। इससे हमें अत्यंत चीजें सीखने का मिली। भविष्य में इस प्रकार के कोर्स लगातार शुरू करवाने चाहिए।			

Neha  
Signature

Date

**S D Mahila Mahavidyalya, Narwana**  
**Student Feedback Performa**

Name	Nimmy			
Class	* 1211913815020			
Roll Number	B.Sc II <sup>nd</sup>			
Email Address				
Session	2022-2023			
Phone No.				
	Excell nt	Very Good	Good	Average
The content was easy to understand.	✓			
It was well organised.		✓		
It engaged the participants in learning.	✓			
The Teacher was able to explain the activity.			✓	
The level of communication of teacher with students		✓		
The event made progress in accomplishing its goal.				✓
I found this event experience to be worthwhile.			✓	
<b>Suggesion</b>	<p>महाविद्यालय में आयोजित किया गया कासी अत्यंत प्रेरणादायक था। इससे हमें अत्यंत चीजें सीखने को मिली। भविष्य में इस प्रकार के कासी लगातार शुरू करवाने चाहिए।</p>			

Date

Nimmy  
Signature

# S.D. MAHILA MAHAVIDYALYA

NARWANA (JIND)

(AFFILIATED TO CH. RANBIR SINGH UNIVERSITY, JIND)

## Certificate of Participation

This is to certify that Miss **NANCY RANI** of **Class B.Sc. II** Participated in **Basic Components of Physics Certificate Course (Session 2022-23)** Course for a duration of 30 hours organized in College Campus by Science Department.



Convener



Co-Convener



Principal



# S.D. MAHILA MAHAVIDYALYA

NARWANA (JIND)

(AFFILIATED TO CH. RANBIR SINGH UNIVERSITY, JIND)

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**NARWANA (JIND)**

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## *Certificate of Participation*

This is to certify that Miss **KOMAL** of **Class B.Sc. II** Participated in **Basic Components of Physics Certificate Course (Session 2022-23)** Course for a duration of 30 hours organized in College Campus by Science Department.



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