

Vimukt Jati seva Samitee's  
**Gramin (ACS) Mahavidyalaya Vasantnagar**  
Tq. Mukhed Dist. Nanded  
**DEPARTMENT OF PHYSICS**

Date : 07/09/2017

**List of Selected Students**

B.Sc. T.Y. 2017-18

Sr. No.	Name of the Students	Sign.
1	Bardapure A.M.	<u>Bar</u>
2	Jayebhaye M.M.	<u>Jimmy</u>
3	Mundhe M.V.	<u>Mundhe</u>
4	Singnath M.V.	<u>SMV</u>
5	Gaikwad A.A.	<u>Gaikwad</u>
6	Bondalwad S.V.	<u>Bond</u>
7	Chandapure L.B.	<u>CLB</u>
8	Dongare B.S.	<u>Dongare</u>
9	Pawar S.L.	<u>Pawar</u>
10	Ku. Rathod V.D.	<u>Rathod</u>
11	Ku. Sambutwad A.V.	<u>SAM</u>
12	Sonkamble P.S.	<u>PS Sonkamble</u>
13	Jadhav S.A.	<u>S. J. Sa.</u>

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Principal  
Gramin Arts, Com. & Science  
Mahavidyalaya, Vasantnagar (Kotiyal)  
Tq. Mukhed Dist. Nanded (M.S.)

# Gramin (ACS) Mahavidyalaya Vasantnagar

## DEPARTMENT OF PHYSICS

Name of the Course : Addon Course Certificate course on,

Year : 2017-18

Name of the Topic : " Semi Conductor Diodes "

Name of the Student :

Roll No. :

Date : / /

1) All Questions are Compulsory.

2) Each Question has 2 marks.

### Objectives of the Course :-

- 1) To understand basic concept of semiconductors , Semiconductor diodes & their characteristics.
- 2) To provide a broad coverage of solid state devices
- 3) Describe the motion of free electrons & vacancies through a P N junction.
- 4) To study & verify the fundamental of P N junction diode in forward bias.
- 5) Acquire the fundamental knowledge & exposes to

### Out comes :-

After completing this course students will be able to

- 1) Identify & understands construction & properties of P N junction diode, zener diode light emitting diode photodiode varactor diode & their V-I characteristics.
- 2) Become aware of the general characteristics of three important semiconductor materials.
- 3) Test semiconductor diodes range small signal diode, zener diode

### Opportunity :-

- 1) There are many career of opportunities in designing & manufacturing diode
- 2) Silicon diode in a D.C Circuit Assembly using connectors blocks.
- 3) Great strides have been made in the manufacturing techniques.

**Associated Agency :-** Sheshadri Globally Educational Competency technique (SGECT)

**Fees :** Unpaid course.

Certificate Details :- Certificate course will be given to the students by sheshadri Global Educational Technique (SGECT)


Course Contents :- Semiconductor Diodes


Unit 1 :- Semiconductor Diodes, Resistance of crystal diode, crystal diode equivalent circuit, crystal diode rectifiers filter circuits.

Unit 2 :- Semiconductor (Definition) type of semiconductor, P N junction diode, light emitting diode zener diode, photo diode, varactor diode & their characteristics

Books Recommended :-1) Principles of Electronics, - V.K. Mehta, Rohit Mehta, S chand  
11<sup>th</sup> Revised Edition 2008 New Delhi 110055

2) Electronics Circuit :- Hand book & design & application, U. Tietze 2008 springer.

  
Dr. Arvi M. A.

  
Principal  
Gramin Aris, Gehen & Seisnee  
Mahavidyalaya, Vasantnager  
(Kollegal) Tq. Mukhed Dist. Mandar

**Gramin (ACS) Mahavidyalaya Vasantnagar**  
**DEPARTMENT OF PHYSICS**

Name of the Course : Addon Course

Name of the Topic : Semi Conductor Diodes

Name of the Student : \_\_\_\_\_

Year : 2017-18

Mars : 50

Time : 1 Hr.

Note : 1) All Questions are Compulsory.

2) Each Questions Two Marks.

- 1) A Crystal diode has ----- PN junction.  
a) One                      b) Two                      c) Three                      d) None of the above
- 2) A Crystal diode has forward resistance of the order of -----  
a)  $K \Omega$                       b)  $\Omega$                       c)  $M \Omega$                       d) None of the above
- 3) The reverse current in a diode is of the order of -----  
a) KA                      b) MA                      c)  $\mu A$                       d) A
- 4) A Crystal diode is used as -----  
a) An amplifier                      b) a rectifier  
c) an oscillator                      d) A voltage regulator
- 5) The leakage current in a crystal diode is due to -----  
a) Minority carrier                      b) Majority carrier  
c) Junction capacitor                      d) None of the above
- 6) When the crystal diode current is large the bias is -----  
a) Forward                      b) Inverse                      c) Poor                      d) Reverse
- 7) A Crystal diode is a ----- device.  
a) Non linear                      b) bilateral                      c) linear                      d) None of the above
- 8) A Zener diode has ----- PN junction.  
a) One                      b) Two                      c) Three                      d) None
- 9) A Zener diode is used as -----  
a) An amplifier                      b) A voltage regulator  
c) a rectifier                      d) Multivibrator
- 10) Zener diode is always ----- connected.  
a) Reverse                      b) Forward  
c) Either reverse or forward                      d) None
- 11) Zener diode Utilizes ----- characteristics for its operations.  
a) Forward                      b) Reverse                      c) Both a & b                      d) None

- 12) Zener diode is ----- device.  
 a) Non linear                      b) linear                      c) a amplifying                      d) None
- 13) Zener diode has ----- breakdown voltage.  
 a) Undefined                      b) Sharp                      c) Zero                      d) None
- 14) The ripple factor of a half-wave rectifier is -----  
 a) 2                      b) 1.21                      c) 2.5                      d) 0.48
- 15) The maximum efficiency of a half-wave rectifier is-----  
 a) 4.06 %                      b) 81.2%                      c) 50 %                      d) 25%
- 16) Zener diode diodes are used primarily as -----  
 a) amplifier                      b) Voltage Regulator                      c) rectifier                      d) oscillator
- 17) A P N junction that radiates energy as light instead of as heat is called a--  
 a)LED                      b) Photo diode                      c) Photo cell d) Zener diode
- 18) The varactor is usually -----  
 a) Forward biased                      b) Reverse biased  
 c) unbiased                      d) in the breakdown region
- 19) A Photo diode is normally -----  
 a) Forward biased                      b) Reverse biased  
 c) Neither forward by nor revere biased                      d) Emitting diode
- 20) The device associated with voltage -- controlled capacitors is -----  
 a) LED                      b) Photo diode                      c) Varactor diode                      d) Zener diode
- 21) When the reverse voltage increase the junction capacitance is -----  
 a) Decreases                      b) increase  
 c) Stays the same                      d) has more bandwidth
- 22) When the light increase the reverse current in a photo diode -----  
 a) increase                      b) decrease                      c) unaffected                      d) None
- 23) ----- is a diode that gives off visible light when forward biased.  
 a) LED                      b) Zener diode                      c) Photo diode                      d) None
- 24) A junction diode which acts as a variable capacitor under changing reverse bias is called -----  
 a) Zener diode                      b) Varactor diode                      c) LED                      d) None
- 25) The forward voltage drop across a silicon diode is about -----  
 a) 2.5 V                      b) 3 V                      c) 10 V                      d) 0.7 V

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