"Education for Knowledge, Science and Culture."
– Shikshanmaharshi Dr. Bapuji Salunkhe

Shri. Swami Vivekanand ShikshanSanstha's

VIVEKANAND COLLEGE (AUTONOMOUS), KOLHAPUR

Department of physics

NOTICE (M.Sc.-II) **Date: 08/03/2021**

The students of M.Sc. II Physics are hereby informed that, their internal examination will be held on **17/03/2021 to 20/03/2021. The** time table is given below.

Sr No.	Paper Code	Name of the paper	Date	Time	Marks
1	CP-1118D	Experimental Techniques	17/03/2021	12.00 to 1.00 pm	20
2	CBP-1119D	Electronics Devices and Applications	18/03/2021	12.00 to 1.00 pm	20
3	CP-1120D	Solid State Physics-III	19/03/2021	12.00 to 1.00 pm	20
4	CP-1121D	Solid State Physics-IV	20/03/2021	12.00 to 1.00 pm	20

Coordinator

HOD

HEAD
DEPARTMENT OF PHYSICS
VIVEKANAND COLLEGE, KOLHAPUR
(AUTONOMOUS)

VIVEKANAND COLLEGE KOLHAPUR (Autonomous) ESTD JUNE 1964

Vivekanand College, Kolhapur (Autonomous).

Department of Physics

M. Sc. Part-II Internal Examination
Subject: Physics

Title of the Paper: Experimental Techniques

Date: 17/03/2021 Time:12.00 noon to 1.00 pm

Day: Tuesday marks: 20

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1) Attempt any 10
2) Each Question carry two mark.
* Indicates required question

1. Email *

2. Name of the Student *

3. Email address *

4. Seat No./Roll No *

1. The order of high vacuum is from .....torr.

- 760 to 25
- 25 to 10-3
- 10-3 to 10-6
- 10-6 to 10-9

2. The vacuum outside the pump is called as..... Vacuum

- Force
- Back
- internal
- external

3. The ultimate pressure obtained with the diffusion pump is.....torr.

- 10-2
- 10-3
- 10-4
- 10-7

4. Mcleod Gauges works on the principles of.....law.

- Newton's
- Kirchoff,s
- Boyle's
- Poisson's

5. Thermal conductivity in molecular flow region is inversely proportional to..... of molar mass of gas.

- Square
- square root
- cube root
- fourth root

6. The order of low vacuum is from ……torr.

- 760 to 25
- 25 to 10-3
- 10-3 to 10-6
- 10-6 to 10

7. At very low pressure mean free path of molecule is quite.

- Small
- large
- circular
- elliptical

8. In mechanical oil sealed pumps the oils used has…….vapour pressure.

- low
- high
- medium
- infinite

9. The temperature of the filament can be measured …..in thermocouple gauge.

- directely
- indirectely
- as zero
- as infinte

10. The order of very high vacuum is from ……torr.

- 760 to 25
- 25 to 10-3
- 10-3 to 10-6
- 10-6 to 10-9

EXPERIMENTAL TECHNIQUES

17 responses

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Untitled Question

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17 responses

Name of the student

Email address

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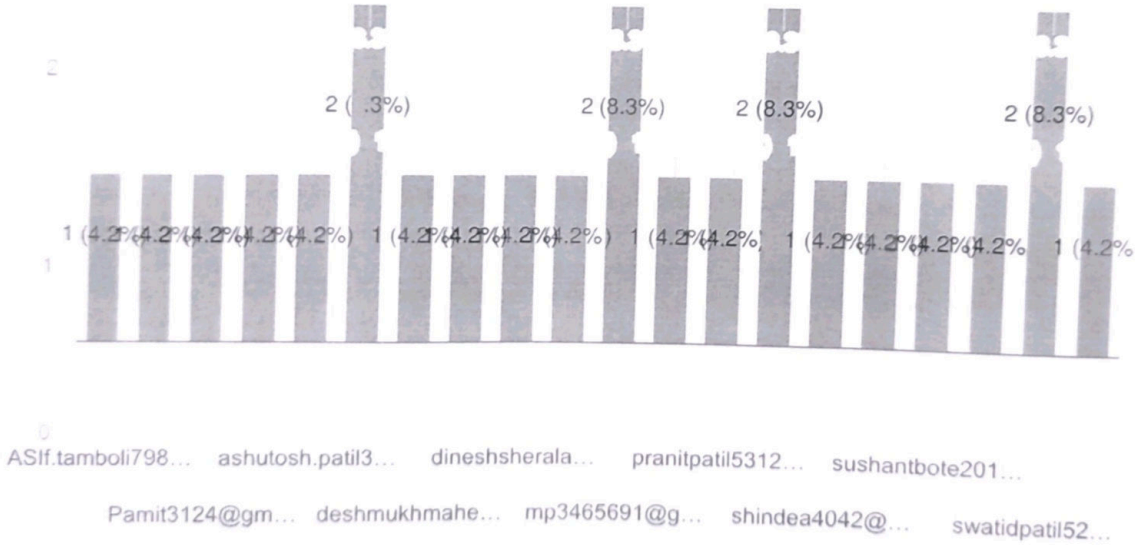
17 responses



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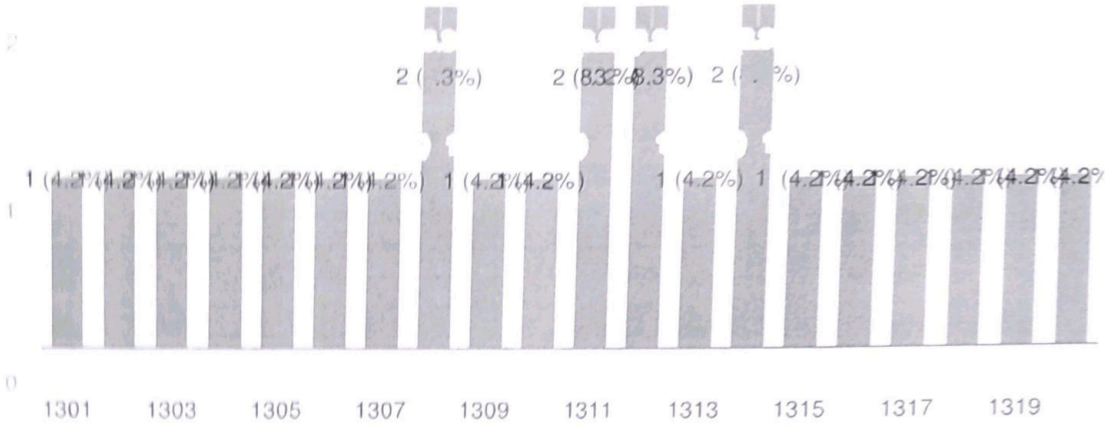
responses



The order of very high vacuum is from ……torr.

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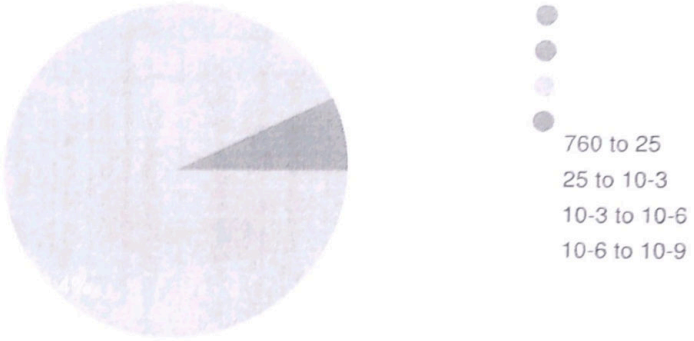
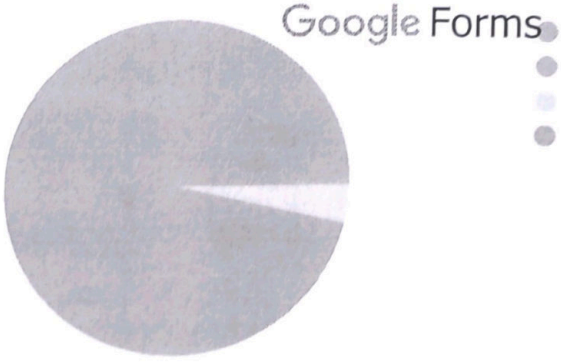
28 responses





Responses:Experimental Techniques:2020-21

Timestamp	Score	Name of the Student	Roll No.	Email address
17/3/2021 10:32:01	20 / 20	Dhamashri Rajesh Phadatare	1316	dhanashrip511@gmail.com
17/3/2021 11:05:25	20 / 20	Mahesh Deshmukh	1302	deshmukhmahesh713@gmail.com
17/3/2021 11:08:04	18 / 20	Patil Pranit Mohanrao	1313	pamit3124@gmail.com
17/3/2021 12:08:07	20 / 20	SHIVPRASAD KRISHNARAO JADHAV	1305	shivajadhav100sj@gmail.com
17/3/2021 12:08:14	20 / 20	Sushant Suresh Bote	1301	sushantbote2015@gmail.com
17/3/2021 12:30:57	20 / 20	Ruchita Rajendra Mandavkar.	1308	ruchitam10198@gmail.com
17/3/2021 12:31:00	16 / 20	Manisha Nanaso Patil	1312	mp3465691@gmail.com
17/3/2021 12:31:07	20 / 20	Vaishnavi Namdeo Tamke	1320	tamkevaishnavi68@gmail.com
17/3/2021 12:31:24	20 / 20	Pooja Ashok Nirmale	1309	Poojanirmale310@gmail.com
17/3/2021 12:31:31	18 / 20	Anuradha Laxman Patole	1315	anuradhaayarekar@gmail.com
17/3/2021 12:31:57	20 / 20	Ketaki vasantrao kadam	1306	ketakikadam166@gmail.com
176/3/2021 12:32:2	20 / 20	Amruta Anandrao shinde	1318	shindea4042@gmail.com
17/3/2021 12:33:07	20 / 20	Asif Jahangir Tamboli	1319	Asif.tamboli7980@gmail.com
17/3/2021 12:33:28	20 / 20	Swati Dinkar Patil	1314	swatidpatil5241@gmail.com
17/3/2021 12:35:42	20 / 20	Aishwarya Dayanand Deshmukhe	1303	aishwaryadeshmukhe11@gmail.com

Vivekanand College, Kolhapur (Autonomous).

Department of Physics

M. Sc. Part-II Internal Examination
Subject: Physics
Title of the Paper: Electronics Devices and Applications

Date: 18/03/2021 **Time:12.00 noon to 1.00 pm**
Day: Wednesday **Marks:20**

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1) Attempt any 10
2) Each Question carry two mark.
* Indicates required question

1. Email *

2. Name of the Student *

3. Email address *

4. Seat No./Roll No *

1 point

1. i) In MESFET device one Schottky barrier for_____.

Mark only one oval.

- Gate
- source
- Drain
- baising

2. ii) The Gunn diode is used in_____resistance region 1 point

Mark only one oval.

- Postive
- Negative
- neutral
- un neutral

3. iii) In_____mode of bipolar junction transistor, emitter base and collector base junction is connected to forward biased. 1 point

Mark only one oval.

- Sturation
- active cutoff
- inverse
-

4. iv) The work function is the energy difference between Fermi level and _____ level. 1 point

Mark only one oval.

- Fermi
- Valence
- Conduction
- Vaccum

5. v) The rectifying behavior could arise from potential barrier in metal semiconductor is called_____contact. 1 point

Mark only one oval.

- Ohmic Schotky-
- ohmicSchotky
- insulating

6. vi) In N channel JFET current carries from_____carrier 1 point

Mark only one oval.

- holes
- electrons
- both holes and electrons
- positrons

7. vii) In JFET gate terminal is connected in _____ biased 1 point

Mark only one oval.

- Reverse
- Forward
- in either ways
- tunnel

8. viii) A tunnel diode is a_____doped 1 point

Mark only one oval.

- Lightely
- Hevily
- moderate
- extremely

9. ix) Gunn diode is also called as_____ 1 point

Mark only one oval.

- JFET
- Schottky diode
- Transferred electronic device
- IMPATT

10. x) The P type semiconductor in tunnel diode act as _____ 1 point

Mark only one oval.

- Anode
- cathode
- both Anode as well as cathode
- neutral

Internal Examination in Electronics Devices and application

19 responses

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Electronics Devices and application

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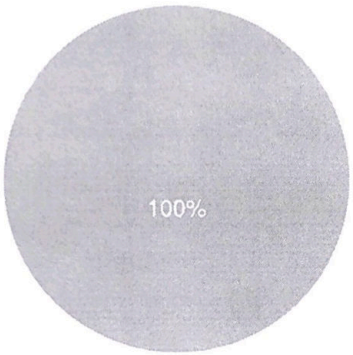
19 responses



Option 1

Name of the student

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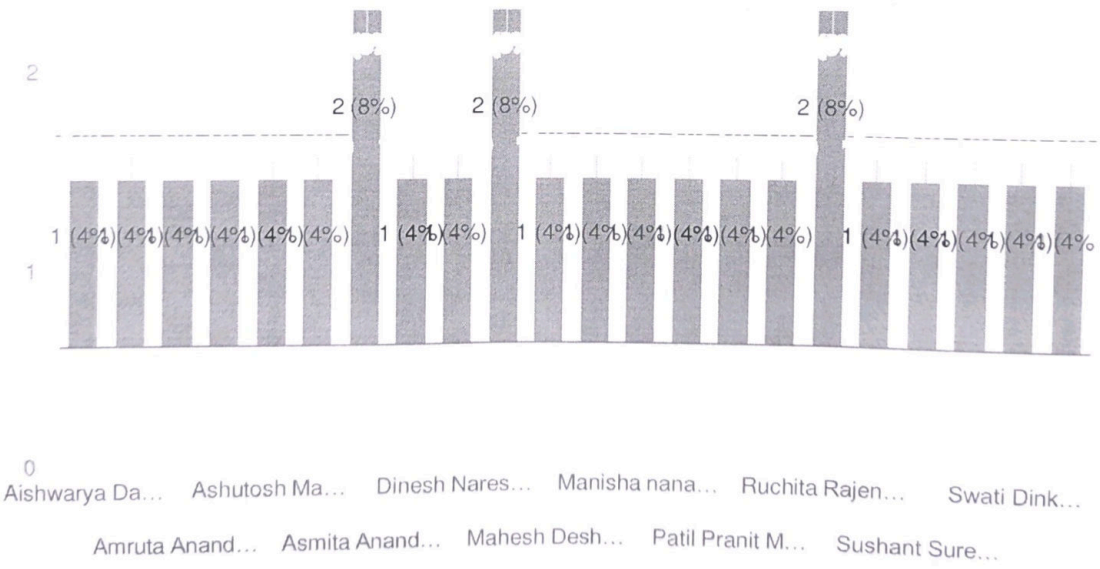
19 responses



Email addresses

19 responses

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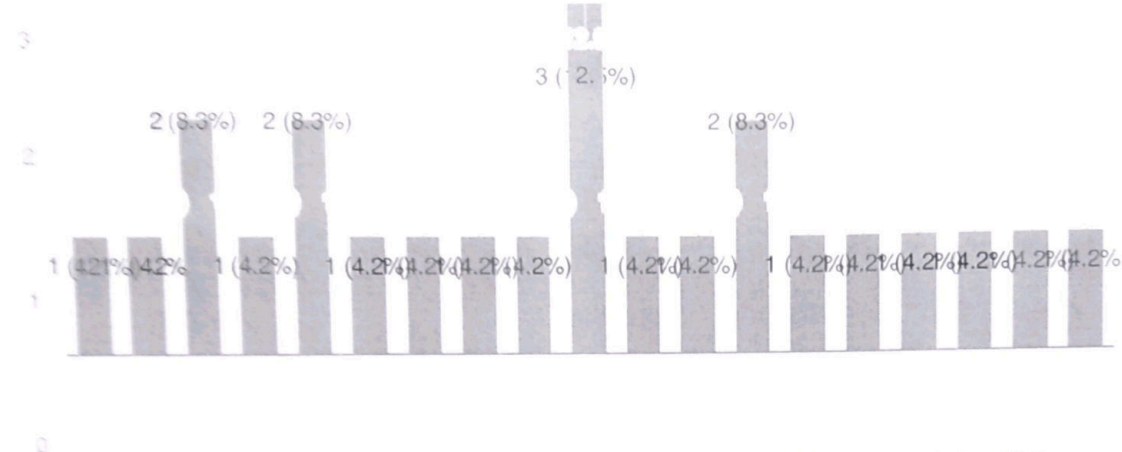

Roll No.

19 responses

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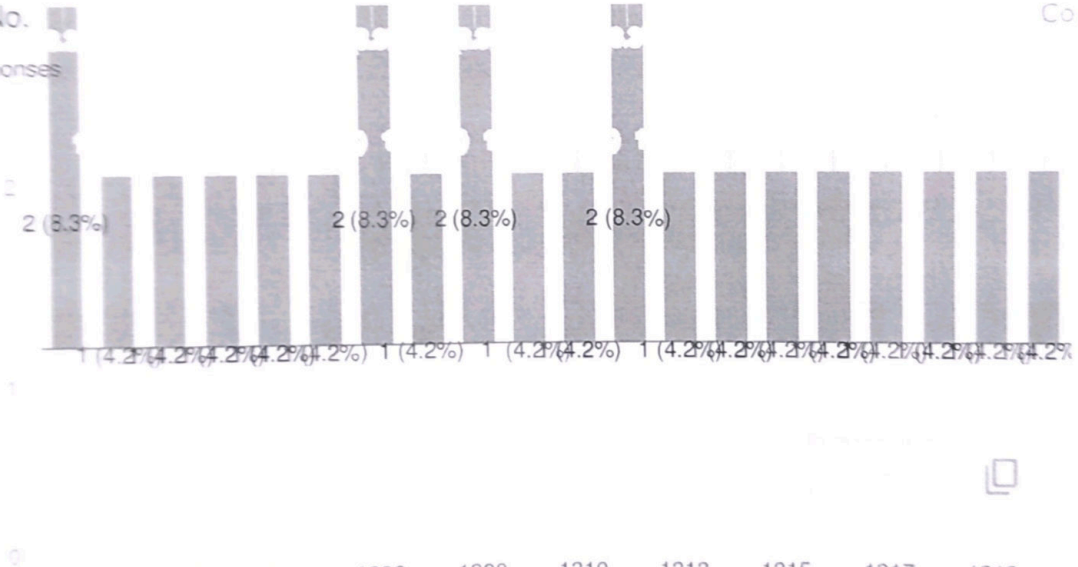
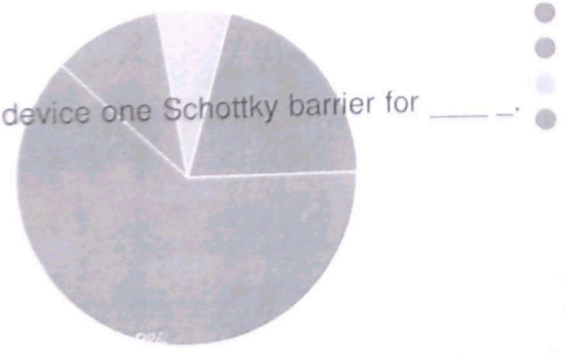


i) In MESFET device one Schottky barrier for ____ .

Copy

19 responses



Responses:Electronics Devices and Applications:2020-21

Timestamp	Score	Name of the Student	Roll No.	Email address
18/3/2021 12:40:21	10 / 20	Dinesh Naresh Sherala	1317	dineshsherala@gmail.com
18/3/2021 12:41:38	16 / 20	Sushant Suresh Bote	1301	sushantbote2015@gmail.com
18/3/2021 12:52:03	20 / 20	Ruchita Rajendra Mandavkar.	1308	ruchitam10198@gmail.com
18/3/2021 12:54:55	20 / 20	Sushant Suresh Bote	1301	sushantbote2015@gmail.com
18/3/2021 12:59:31	20 / 20	Ketaki vasantrao kadam	1306	ketakikadam166@gmail.com
18/3/2021 1:16:54 P	20 / 20	Patil Pranit Mohanrao	1313	pranitpatil5312@gmail.com
18/3/2021 1:23:35 P	18 / 20	Amruta Anandrao shinde	1318	shindea4042@gmail.com
18/3/2021 1:23:47 P	18 / 20	Asmita Anandrao Patil	1311	asmitapatil113@gmail.com
18/3/2021 1:28:02 P	20 / 20	Manisha Nanaso Patil	1312	mp3465691@gmail.com
18/3/2021 1:28:16 P	18 / 20	Vaishnavi Namdeo Tamke	1320	tamkevaishnavi68@gmail.com
18/8/2021 1:28:29 P	20 / 20	Pooja Ashok Nirmale	1309	Poojanirmale310@gmail.com
18/3/2021 1:29:26 P	20 / 20	Anuradha Layman Patole	1315	anuradhaayarekar@gmail.com
18/8/2021 1:30:18 P	20 / 20	Susmita chandar Kamble	1307	susmitakamble2311@gmail.com
18/8/2021 1:39:41 P	20 / 20	Dhanashri Rajesh Phadatare	1316	dhanashrip511@gmail.com
18/8/2021 2:03:27 P	20 / 20		1315	anuradhaayarekar@gmail.com
18/8/2021 2:36:16 P	18 / 20	Mahesh Deshmukh	1302	deshmukhmahesh713@gmail.com
18/3/2021 3:41:01 P	20 / 20	Amit Ashok Jadhav	1304	pamit3124@gmail.com
18/3/2021 8:57:18 P	20 / 20	JADHAV	1305	shivajadhav100sj@gmail.com
18/3/2021 8:59:42 P	20 / 20	Asif Jahangir Tamboli	1319	Asif.tamboli7980@gmail.com
18/3/2021 8:59:42 P	16 / 20	Swati Dinkar Patil	1314	swatidpatil5241@gmail.com

Vivekanand College, Kolhapur (Autonomous).

Department of Physics

M. Sc. Part-II Internal Examination

Subject: Physics

Title of the Paper: Solid State Physics-III

Date: 19/03/2021 **Time:12.00 noon to 1.00 pm**

Day: Thursday **Marks: 20**

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1) Attempt any 10

2) Each Question carry two mark.

* Indicates required question

1. Name of the student

2. Email

3. Roll No.

4. i) A photodiode is basically p-n junction or a metal semiconductor contact operated under____. 1 point

Mark only one oval.

- Forward basied
- Reverse baised
- grounded
- open

5. ii) According to Bohr's third postulate electron de-excite from higher energy state to lower energy state resulted a photon having energy_____. 1 point

Mark only one oval.

- hυ= Elower – Ehigher
- hυ= Ehigher – Elower
- hυ= Elower x Ehigher
- hυ= Elower / Ehigher

6. iii) Photodectectors has_____junction that convert light photon into current. 0 points

Mark only one oval.

- Schottky
- p-n
- ohmic
- reactive

7. iv)_____convert light energy into electrical energy. 1 point

Mark only one oval.

- MESFET
- Gunn diode
- laser
- solar cell

8. v) The rectifying behavior could arise from potential barrier in metal semiconductor is called_____contact. 1 point

Mark only one oval.

- Ohmic Schotky-
- ohmicSchottky
- inductive
-

9. vi)_____is a device that emits a beam of coherent light through an optical amplification process. 1 point

Mark only one oval.

- MESFET
- Gun diode
- lase
- solar cell

10. vii) The band of silicon_____ev. 1 point

Mark only one oval.

- 0.67
- 0.7
- 0.33
- 1.14

11. viii) _____bandgap material tends to be better for photovoltaic, LED, laser 1 point

Mark only one oval.

- Indirect
- direct
- direct and indirect
- insulating

12. ix) Light emmiting diode in_____biased 1 point

Mark only one oval.

- forward
- reverse
- grounded
- open

13. x) The P type semiconductor in tunnel diode act as _____ 1 point

Mark only one oval.

- Anode
- cathode
- anode and cathode
- open

Internal examination on SOLID STATE PHYSICS- III (Physical properties of solid)

21 responses

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Name of the student

21 responses

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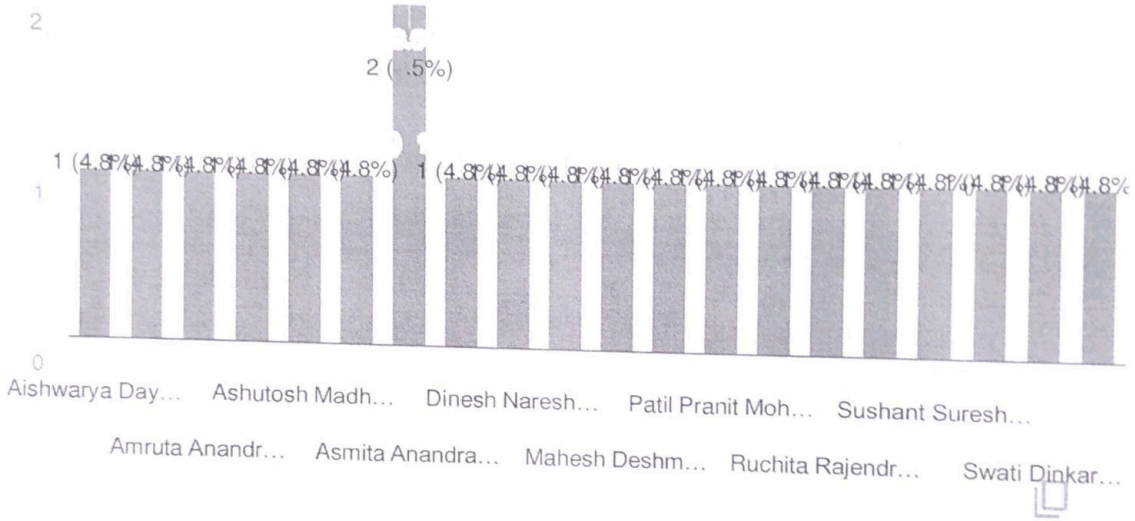

Email

21 responses

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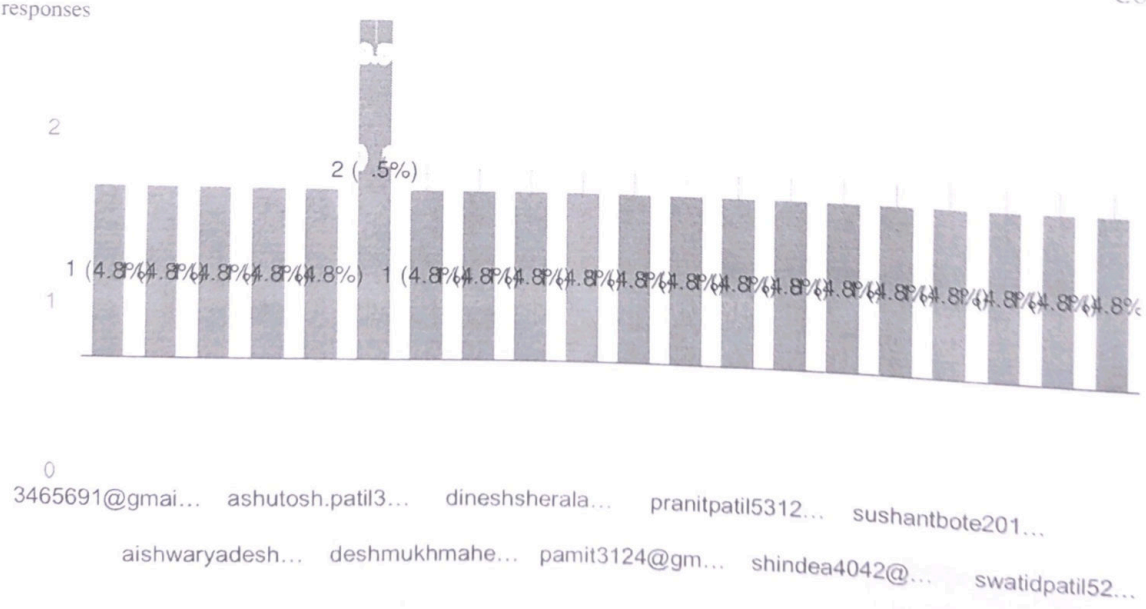
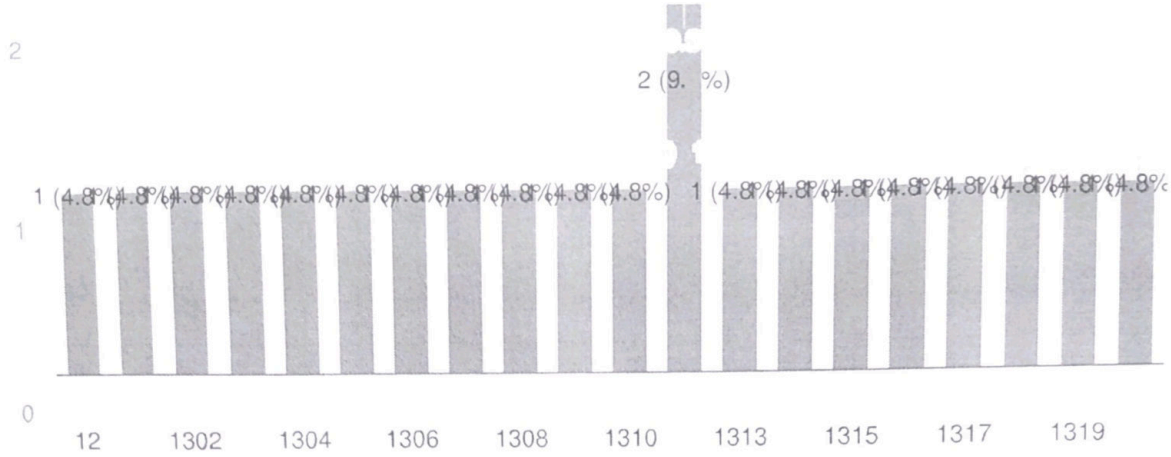


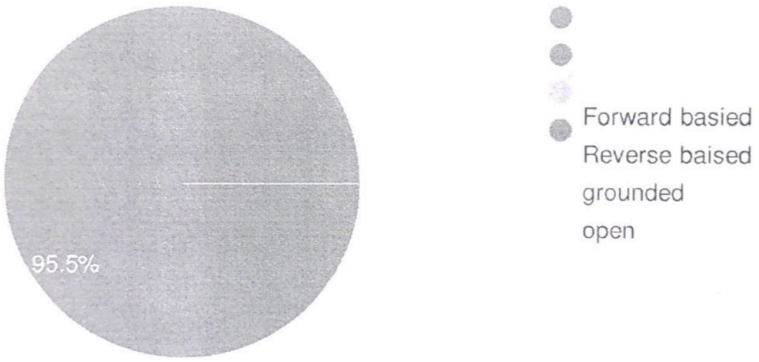
Roll No.

21 responses



i) A photodiode is basically p-n junction or a metal semiconductorcontact operated under____.

22 responses



ii) According to Bohr's third postulate electron de-excite from higherenergy state to lower energy state resulted a photon having energy _.

22 responses

Responses: Solid State Physics-III:2020-21

Timestamp	Score	Name of the student	Email	Roll No.
19/3/2021 12:17:26 PM	18 / 20	Patil Pranit Mohanrao	pranitpatil5312@gmail.	1313
19/3/2021 12:17:46 PM	20 / 20	Dhamashri Rajesh Phadatare	dhanashrip511@gmail.	1316
19/3/2021 12:21:02 PM	20 / 20	Amruta Anandrao shinde	shindea4042@gmail.co	1318
19/3/2021 12:37:52 PM	20 / 20	Swati Dinkar Patil	swatidpatil5241@gmail	1314
19/3/2021 12:40:21 PM	20 / 20	Asmita Anandrao Patil	asmitapatil113@gmail.(	1311
19/3/2021 12:40:57 PM	18 / 20	Vaishnavi Namdeo Tamke	tamkevaishnavi68@gm	1320
19/3/2021 12:41:08 PM	20 / 20	Ruchita Rajendra Mandavkar.	ruchitam10198@gmail.	1308
19/3/2021 12:41:12 PM	20 / 20	Ketaki vasantrao kadam	ketakikadam166@gma	1306
19/3/2021 12:41:14 PM	20 / 20	Sushant Suresh Bote	sushantbote2015@gma	1301
19/3/2021 12:43:24 PM	20 / 20	Pooja Ashok Nirmale	poojanirmale310@gma	1309
19/3/2021 12:44:35 PM	16 / 20	Asmita Anandrao Patil	asmitapatil113@gmail.(	1311
19/3/2021 12:44:48 PM	20 / 20	Susmita chandar Kamble	susmitakamble2311@g	1307
19/3/2021 12:45:19 PM	20 / 20	Dinesh Naresh Sherala	dineshsherala@gmail.c	1317
19/3/2021 12:49:15 PM	10 / 20	Manisha Nanaso Patil	3465691@gmail.com	1312
19/3/2021 12:52:45 PM	16 / 20	Amit Ashok Jadhav	pamit3124@gmail.com	1304
19/3/2021 1:10:23 PM	20 / 20	Asif Jahangir Tamboli	Asif.tamboli7980@gma	1319
19/3/2021 1:15:31 PM	20 / 20	Ashutosh Madhukar Patil	ashutosh.patil3997@gr	1310
19/3/2021 2:28:36 PM	20 / 20	Mahesh Deshmukh	deshmukhmahesh713@	1302
19/3/2021 3:35:52 PM	4 / 20	SHIVPRASAD KRISHNARAO JADH	shivajadhav100sj@gma	1305
19/3/2021 8:12:18 PM	20 / 20	Aishwarya Dayanand Deshmukhe	aishwaryadeshmukhe1	1303
19/3/2021 9:49:27 PM	20 / 20	Anuradha Laxman Patole	anuradhaayarekar@Gr	1315

Vivekanand College, Kolhapur (Autonomous).

Department of Physics

M. Sc. Part-II Internal Examination

Subject: Physics

Title of the Paper: Solid State Physics-IV

Date: 20/03/2021 **Time:12.00 noon to 1.00 pm**

Day: Friday **Marks-III**

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1) Attempt any 10

2) Each Question carry two mark.

* Indicates required question

1. Email *

2. Name of the Student *

3. Email address *

4. Seat No./Roll No *

1. i) The first dye-sensitized solar (DSC) cell concept is presented by... * 1 point

Mark only one oval.

- Gratzel
- Einstein
- C. V. Raman
- Dirac

2. ii) The dye-sensitized solar cell is .....type device. * 1 point

Mark only one oval.

- mass
- charge
- photoelectrochhemica potential
- energy

3. iii) In the dye-sensitized solar cell normally ..... type of electrolyte is used * 1 point

Mark only one oval.

- solid double
- layerliquid
- gas
-

4. iv) Theoperation of DSC is considered similar to that .....process. 1 point

Mark only one oval.

- electric magnetic
- magnetocaloric
- photosynthesis
-

5. v) In the DSC, the light is being absorbed by the material called as..... 1 point

Mark only one oval.

- dye
- elecrolyte
- anode
- cathode

6. vi) In DSC.....type of semiconductor material has been used. 1 point

Mark only one oval.

- p
- n
- widebandgap
- narrow band gap

7. In the operation of DSC in first step, the absorption of a photon by .....takes place. 1 point

Mark only one oval.

- dye
- electrolyte
- anode
- cathode

8. viii) The excited time for the dye molecule is of the order of .....seconds 1 point

Mark only one oval.

- nano
- micro
- mili
- fempto

9. ix) The most extensively applied and successful material used in DSC is..... 1 point

Mark only one oval.

- TiO2
- MnO2
- CuO
- NiO

10. x) The desirable properties of the dye are to have a wide range of spectrum and .....absorption coefficient. 1 point

Mark only one oval.

- lower
- higher
- intermediate
- infinite

20 responses

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ROLL NO

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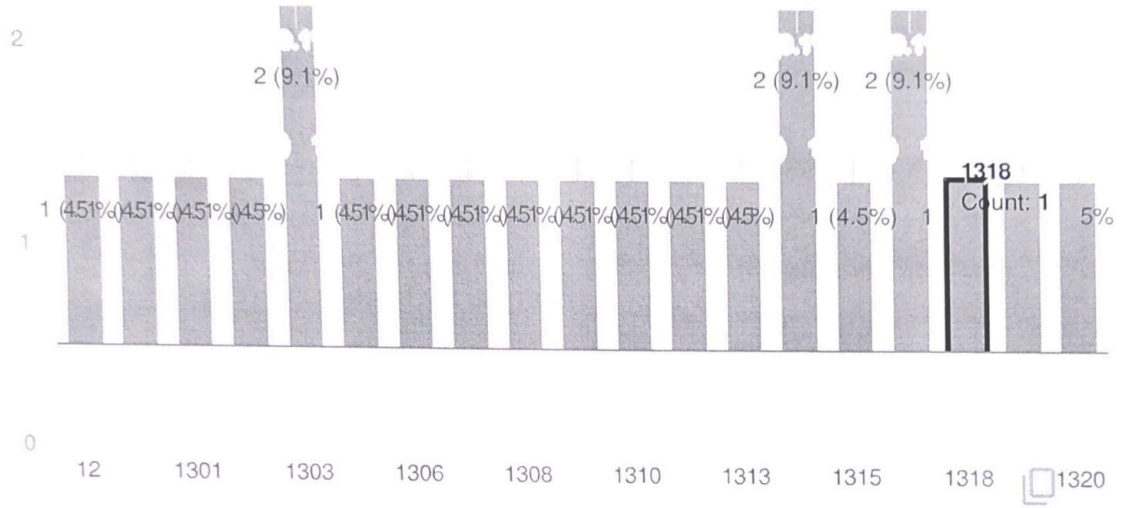
20 responses



Email address

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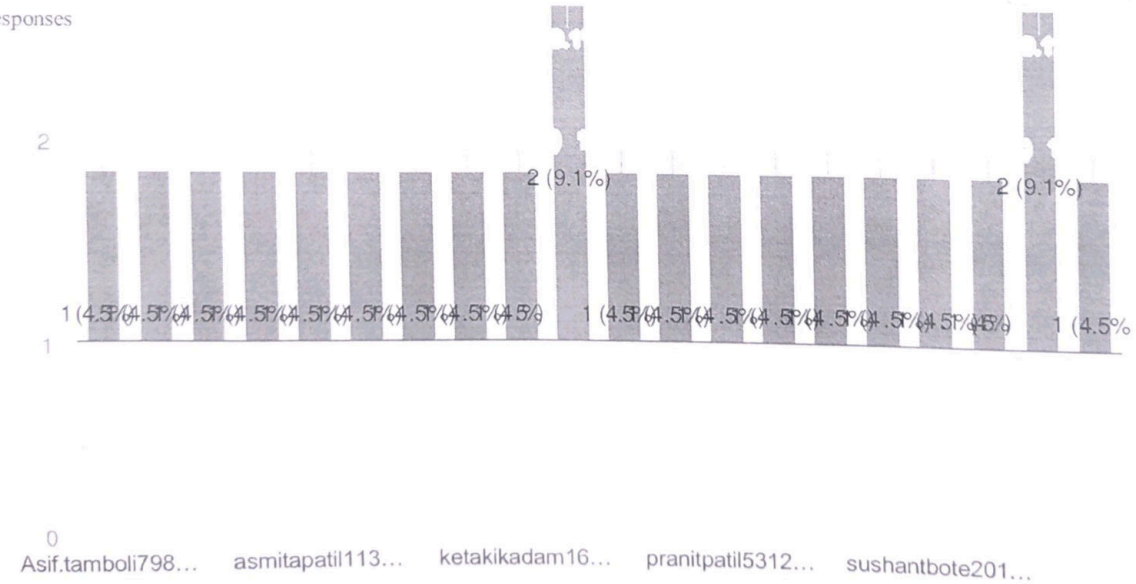
20 responses



Responses:Solid State Physics-IV:2020-21

Timestamp	Score	Name of the Student	Roll No.	Email address
20/3/2021 9:59:12 AM	20 / 20	Dhamashri Rajesh Phada	1316	dhanashrip511@gmail.com
20/3/2021 10:30:18 AM	20 / 20	Patil Pranit Mohanrao	1313	pranitpatil5312@gmail.com
20/3/2021 10:37:54 AM	18 / 20	Amruta Anandrao shinde	1318	shindea4042@gmail.com
20/3/2021 11:05:37 AM	20 / 20	Manisha Nanaso Patil	1313	mp3465691@gmail.com
20/3/2021 11:08:57 AM	20 / 20	Asmita Anandrao Patil	1312	mp3465691@gmail.com
20/3/2021 11:26:59 AM	20 / 20	Vaishnavi Namdeo Tamk	1320	tamkevaishnavi68@gmail.com
20/3/2021 11:28:35 AM	16 / 20	Pooja Ashok Nirmale	1309	poojanirmale310@gmail.com
20/3/2021 11:56:31 AM	20 / 20	Aishwarya Dayanand De	1303	aishwaryadeshmukhe11@gmail.com
20/3/2021 12:22:29 PM	20 / 20	Ruchita Nikam	1308	ruchitam10198@gmail.com
20/3/2021 12:24:09 PM	18 / 20	Sushant KAMBLE	1307	susmitakamble2311@gmail.com
20/3/2021 12:28:09 PM	20 / 20	Ketaki vasantrao kadam	1306	ketakikadam166@gmail.com
20/3/2021 12:28:12 PM	20 / 20	Asmita Anandrao Patil	1311	asmitapatil113@gmail.com
20/3/2021 12:33:32 PM	20 / 20	Sushant Suresh Bote	1301	sushantbote2015@gmail.com
20/3/2021 12:34:06 PM	20 / 20	Dinesh Sherala	1316	dineshsherala@gmail.com
20/3/2021 12:34:19 PM	20 / 20	Mahesh DESHMUKH	1302	deshmukhmahesh713@gmail.com
20/3/2021 12:35:05 PM	18 / 20	Amit Ashok Jadhav	1304	pamit3124@gmail.com
20/3/2021 12:42:42 PM	18 / 20	Ashutosh Madhukar Patil	1303	shivajadhav100sj@gmail.com
20/3/2021 12:43:43 PM	20 / 20		1310	ashutosh.patil3997@gmail.com
20/3/2021 1:05:45 PM	16 / 20	Asif Jahangir Tamboli	1319	Asif.tamboli7980@gmail.com
20/3/2020 1:12:10 PM	20 / 20	Sawti patil	1314	swatidpatil5241@gmail.com