

R. Shanthy

Assistant Professor

Department of Physics

J.J. College of Arts & Science

Pudukkottai.

Year: June 2020 - November 2020

	1	2	3	4	5	6
D <sub>1</sub>		II M.Sc				I B.Sc
D <sub>2</sub>		II M.Sc	I B.Sc			II M.Sc
D <sub>3</sub>	I B.Sc	II M.Sc	I B.Sc	II M.Sc		
D <sub>4</sub>		II M.Sc		II M.Sc		
D <sub>5</sub>		II M.Sc				
D <sub>6</sub>		II M.Sc				

1. Solid State physics - P3RHCC10
2. Properties of matter and sound  
- UIRIPACC1

Hours: 5

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Hours: 2

ms

- v) Triclinic crystal
- vi) Trigonal crystal
- vii) Hexagonal crystal.

*Th*  
Dr. M.K. MURALI, M.Sc., M.Phil., Ph.D.  
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J.J. COLLEGE OF ARTS AND SCIENCE (AU),  
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R. Shanthi

ALIED PHYSICS - III

UNIT - I ELECTROSTATICS

R. SHANTHI

ASSISTANT PROFESSOR

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PUDUKKOTTAI

Year: Dec'2020 - Apr'2021

	1	2	3	4	5
D <sub>1</sub>	IB.Sc ←	I M.Sc	→	II Maths A	
D <sub>2</sub>	II Maths A		III B.Sc		
D <sub>3</sub>	II Maths A		I M.Sc		
D <sub>4</sub>	←	II Maths 'A'		→	II Maths A
D <sub>5</sub>		II Maths A			I M.Sc
D <sub>6</sub>		III B.Sc	←	→ III CS 'A'	

1. Allied Physics III - U4RPHAC6
2. Elements of Theoretical Physics - U6RPHAC6
2. Electromagnetic theory - P2RPHCC5

Date: 01/03/21 Day order: D<sub>2</sub> Hours: 3

## De Broglie wavelength

According to de Broglie the moving particle whatever its nature has wave properties associated with it.

$$\lambda = \frac{h}{p} = \frac{h}{mv}$$

such waves associated with matter particles are called matter waves (or) de Broglie waves.

$$p = \frac{h\nu}{c}$$

$$\lambda = h/p$$

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logdown  
note  
2020

119

MR. S. SRIKUMAR  
Assistant Professor  
Department of physics  
T.J. college of Arts &  
Science  
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2

Academic year June 2020 - NOV 2020

- ⑥ Analog & Digital Electronics PIRIPHCC3
- Applied Physics U3RPHAC1
- Biomedical instrumentation U4RPHSBE2

	1	2	3	4	5
D <sub>1</sub>		Allied	TIICGT		
D <sub>2</sub>	←	II CS B	→	Allied	IM.Sc
D <sub>3</sub>	←	II CS	→		
D <sub>4</sub>	SBE II	IMAT	Allied		Allied
D <sub>5</sub>		IM.Sc			IM.Sc
D <sub>6</sub>	Allied		IM.Sc		Allied

previous  
Semester  
note.  
2021  
VI

D//

MR. S. SASIKUMAR  
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Academic year : Dec 2020 - Apr 2021

Semester - IV

1. Crystal Growth & Thin Film P3R1PHEC2
2. Physics for Home Appliances D6RPHSBE3
3. Applied Physics U3R1PHAC3

	1	2	3	4	5	6
D <sub>1</sub>	II.M.Sc		I.M.Sc			
D <sub>2</sub>	II.M.Sc		III.UG1			
D <sub>3</sub>	II.M.Sc			I.M.Sc		
D <sub>4</sub>	II.M.Sc		I.M.Sc			II.M.Sc
D <sub>5</sub>	II.M.Sc		III.UG1		I.M.Sc	II.M.Sc
D <sub>6</sub>	II.M.Sc	I.M.Sc				II.M.Sc

## Washing Machine Shakes or vibrates:-

\* In most cases, a washing machine shakes or vibrates when it isn't sitting level on the floor or because it has an out-of-balance wash load.

☞ \* Unplug the washer before doing any work on it.

## 16/3/21 Pressure:-

\* Contrary to popular belief pressure geysers do not create pressure.

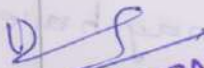
\* The difference between a gravity geyser and a pressure one is that water in a pressure geyser is stored at incoming water pressure.

\* Whilst a standard geyser only stores water and the only pressure occurrence is by the fail to the tap.


## Non-pressure:-

\* Most of the impact fees on non-pressure solar geyser come from county and state operation and more than ten million dollars are allocated to current environmental initiatives.

\* Due to this reason, we need must more information about how to use low pressure solar geyser.

  
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Dr. K. DHANABALAN

ASST. PROF. OF PHYSICS

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Academic Year : June '2020 - NOV '2020

Hr Day	1	2	3	4	5	6
D <sub>1</sub>		I-M.Sc		II-M.Sc		II M.Sc
D <sub>2</sub>	I-M.Sc			II-M.Sc		I B.Sc
D <sub>3</sub>	I-M.Sc			II-M.Sc		II M.Sc
D <sub>4</sub>		I-B.Sc		II-M.Sc		I M.Sc
D <sub>5</sub>		I-B.Sc		II-M.Sc		
D <sub>6</sub>		I-M.Sc				II M.Sc

1. numerical methods and computational physics (sub. code: PIRIPHECI)

2. properties of matter and sound (sub. code: UIRIPHCCI)

04/12/20  
25) 1st

P:	40	50	60	70	80	90
t:	184	204	226	250	276	304

Using Newton's interpolation formula, find the melting point of the alloy containing 84% of lead.

P	t	$\Delta t$	$\Delta^2 t$	$\Delta^3 t$	$\Delta^4 t$	$\Delta^5 t$
40	184	20				
50	204	22	2			
60	226	24	2	0		
70	250	26	2	0	0	
80	276	28	2	0	0	0
90	304					

$t_{84} = 287$  nearly

D  
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C.D.  
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*[Faint handwritten notes at the bottom of the page]*

Dr. K. DRAMABALAN

ASST. PROF. OF PHYSICS

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Pudukkottai - 622 422.

Academic Year : Dec'2020 - Apr'2021

Day \ Hr	1	2	3	4	5
D <sub>1</sub>	I-UG Lab			I-UGT	
D <sub>2</sub>		III-BSc			I-BSc
D <sub>3</sub>	III-UGT Lab (or)			I-BSc	
D <sub>4</sub>	II-CS (or) Lab				I-BSc
D <sub>5</sub>				I-BSc	
D <sub>6</sub>	III-BSc B' Lab (or)			III-BSc	I-BSc

1. Computer programming - C language

(Sub. Code: U6RIPHMBE2)

2. Mechanics (Sub. Code: U2RIPHCC3)

16/09/21  
21/2nd yr  
Files

- \* If we want to store data in a file in the secondary memory.
- \* we must specify certain things about the file, to the following operating system.

\* They include:

- ① filename
- ② data structure
- ③ purpose.

\* Filename is a string char that make up a valid function filename for the operating system.

\* It may contain two parts, a primary name and an optional period with the extension.

eg:

input data  
store  
prog.c  
student.c  
text out

we open a file, we must specify what we want to do with the file.

eg:

FILE \*fp;

fp = fopen ("filename", "mode");

Consider the following statement

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Dr. S. GEEITHA

Asst. Prof. of Physics

JJC

2020 - 2021 - Even Semester

1. Programming in C, Language  
- U6R1PHMBE2 ✓

2. Mechanics - U2R1PHCC3 ✓

3. Laser physics - U4RPHSBE1 ✓

4. Electromagnetic Theory - P2RPHCC5 ✓

Dist Order	1	2	3	4	5	6
D <sub>1</sub>	III U4 Phy A	I U4 Phys	I U4 Phys		III U4 Phys	
D <sub>2</sub>	III U4 Phys	I U4 Phys		I U4 Phys		
D <sub>3</sub>					I U4 Phys	
D <sub>4</sub>		I U4 Phys		I U4 Phys		
D <sub>5</sub>	III U4 Phys		I U4 Phys	I U4 Phys		
D <sub>6</sub>	I U4 Phys	II U4 Phys				

# Solving Quadratic Equation:

```
# include <math.h>
main( )
```

```
{ float a, b, c, discriminant, root1, root2;
```

```
Printf ("input values of a, b and c\n");
scanf ("%f %f %f", &a, &b, &c);
```

```
discriminant = b*b - 4*a*c;
```

```
if (discriminant < 0)
```

```
Printf ("\n\nRoots ARE IMAGINARY\n");
```

```
else
```

```
{ root1 = (-b + sqrt(discriminant)) / (2*a);
```

```
}
```

```
}
```

O/P:

Input values of a, b and c

2 4 -16.

Root 1 = 2.00

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Dr. S. Geetha  
 Asst. Prof. of Physics  
 JJ College of Arts and  
 Science (A)  
 Pudukkottai.

2020-2021 - Odd Semester

1. Optics and Spectroscopy - U5RPHCC8

2. Thermal and Statistical Physics  
 Thermal Physics - U3R1PHCC4

3. Classical Mechanics  
 - P1R1PHCC2

Day/Week	1	2	3	4	5
D <sub>1</sub>			II UG Phy 'A'		
D <sub>2</sub>	III UG Phy		II UG 'A'		
D <sub>3</sub>	I PG	II UG 'A'		III UG	
D <sub>4</sub>		II UG maths 'A'		II UG 'A'	
D <sub>5</sub>		I PG	II UG		II UG 'A'

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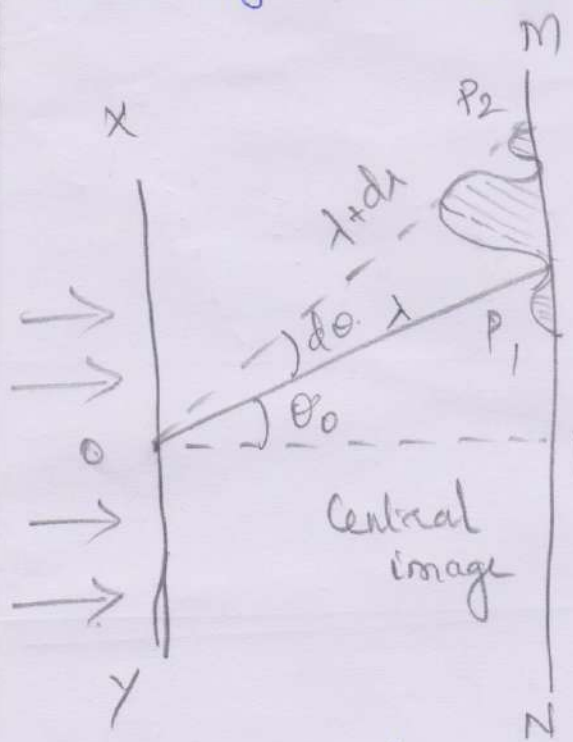
the grating  
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grating 'y

3  
n  $\Delta^k$  APL,  
= (a+b) (   
n $\theta$  + 8  $\sin^2 \theta$  )  
primary max,  
n $\theta$  + 8  $\sin^2 \theta$  ] and

$$\frac{n\lambda}{(a+b) \cos \frac{\theta - i}{2}}$$

= n $\lambda$

### Resolving Power of Prism:



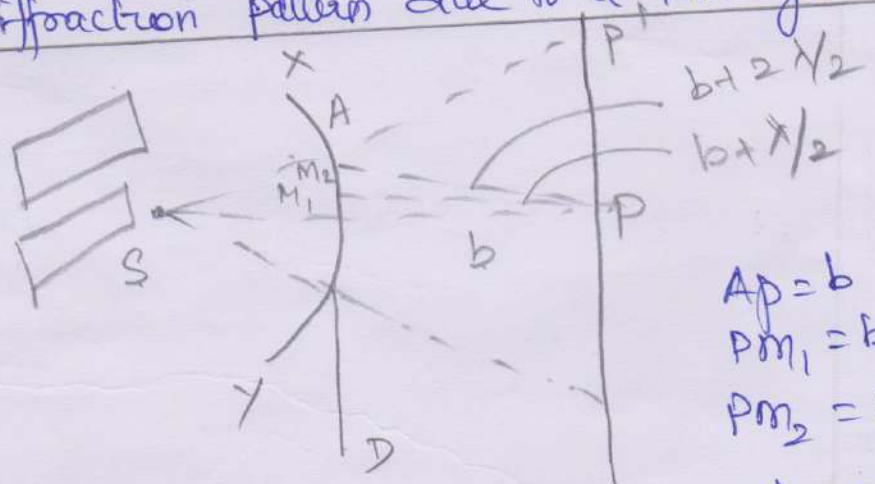
It is defined as the ratio of the wavelength  $\lambda$  of any spectral line to the smallest difference in wavelength  $d\lambda$ .

$$R(\lambda) = \frac{\lambda}{d\lambda} = nN$$

$$\text{OR } \frac{d}{d\lambda} = nN$$

The qty  $\frac{d}{d\lambda} = nN$  measures the resolving power of grating. It is directly proportional to order of spectrum and total no. of lines/cm on the grating.

### Diffraction pattern due to a straight edge:



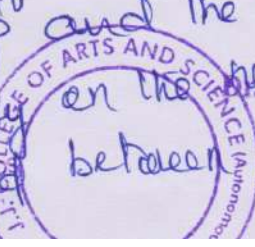
$$Ap = b$$

$$Pm_1 = b + \lambda/2$$

$$Pm_2 = b + 2\lambda/2$$

B is the pole of the wavefront with reference to the point P and the intensity at P will depend mainly on the number of half periods between the points A and B.

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J. J. College of Arts and Science (Autonomous)  
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Subject : Mathematical Physics

Subject Code : P1R1PHCC1

Semester : I

P. Menaka

Assistant professor in Physics

J.J. College of Arts & Science

PDK

Academic year - June 2020 - Nov 2020

1. Mathematical physics - P1R1PHCC1
2. Applied Physics - I - U3R1PHAC1

### ONLINE TIME TABLE

D/O	1	2	3	4	5	6
D <sub>1</sub>		II U4 CS		I PG Phys		II U4 CS
D <sub>2</sub>		II U4 CS		I PG Phy	I U4	
D <sub>3</sub>	II U4 CS		I PG		II U4 CS	
D <sub>4</sub>	II U4 CS	I PG		II U4 CS		
D <sub>5</sub>			II U4 CS			II U4 CS
D <sub>6</sub>		II U4 CS			II U4 CS	

Relation III:

$$x L_n''(x) + (1-x) L_n'(x) + n L_n(x) = 0$$

Relation IV:

$$e^n \frac{d^n}{dx^n} (x^n e^{-x}) = L_n(x)$$

D P

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*[Handwritten signature]*

P. MENAKA

Assistant Professor  
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Pudukkottai.

Academic year: Dec 2020 - Apr - 2021

Semester - IV - ~~2020-2021~~

1. Basic Electronics - U4RIPHCC7 - U4
2. Allied Physics - III - U4RIPHAC5 - U4

ONLINE TIME TABLE

OFFLINE TIME TABLE

Day Order	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>V</u>	Day Order	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>V</u>
D <sub>1</sub>				Allied II CS -A		D <sub>1</sub>	← II U4 CS (Lab) →				
D <sub>2</sub>		II U4 Phy A			II U4 Allied -A	D <sub>2</sub>	← II U4 Phy A →		II U4 Phy A	II U4 CS A	
D <sub>3</sub>		II U4 CS -A			II U4 Phy A	D <sub>3</sub>		II U4 CS -A		II U4 Phy A	
D <sub>4</sub>	Allied A CS			II CS Phy A		D <sub>4</sub>	II U4 CS -A			II U4 Phy A	
D <sub>5</sub>	II U4 Phy A		II U4 Phy A		II CS A	D <sub>5</sub>			II U4 Phy A		II U4 CS -A
D <sub>6</sub>	II Phy A	II U4 CS -A	II Phy U4 -A			D <sub>6</sub>	II U4 Phy A	II U4 CS -A	← III CS A Lab (AMP) →		

Date: 31/03/21. Day order: D<sub>6</sub>

Hour: 1, 2

UJT as an relaxation oscillator.

⇒ It consists of a UJT and a capacitor  $C_E$  which is charged through  $R_E$  as the supply voltage  $V_{B1}$  is switched ON.

⇒ The voltage across the capacitor increases exponentially and when the capacitor voltage reaches the peak point voltage  $V_p$ , the UJT starts conducting and the capacitor voltage is discharged rapidly through  $E_B$  and  $R_1$ .

⇒ After reach point voltage reached zero, the device cuts off and capacitor  $C_E$ .

TH2 → P

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P. Parameswari,  
 Assistant professor,  
 Department of physics,  
 J.J. College of Arts  
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 Pudukkottai.

Academic year: June 2020 -

November 2020

1. Allied physics - I - USRPHAC4 (UG)
2. Optics and Spectroscopy -  
 USRPHCC2 (UG)
3. classical dynamics and  
 relativity - PIRPHCC2 (PG)

	1	2	3	4	5	6
D <sub>1</sub>		III phy	II MA & che	I PG		
D <sub>2</sub>	II MA & che		III phy		II MA & che	
D <sub>3</sub>	II MA & che	III phy	I PG			III phy
D <sub>4</sub>	III phy	II MA & che		II MA & che		
D <sub>5</sub>	III phy		II MA & che	I PG		I PG
D <sub>6</sub>	II MA & che	III phy		II MA & che		