

Day	Class/ Section	8.15 am – 9.10 am	9.10 am – 10.05 am	10.45am - 11.40am	11.40 am – 12.30 pm	12.30 pm – 1.20 pm	1.20 pm-02.10 pm
		Revision	Revision	Revision	Revision	Revision/Remedial	Remedial
MON	III Sem BSc MEC	Electronics III- JS	Maths III - RN	English	DBMS (AC)	Language Hin/Kan	Maths III - RN
	III Sem BSc PCM	Physics III - AB	Maths III - RN	English	Chemistry III- RG	Language Hin/Kan	Maths III - RN
	V Sem BSc MEC	Electronics V - MM	Maths VI - PK	Electronics VI- JS	VP (LCB)	Maths V - RN	Maths VI - RAK
	V Sem BSc PCM	Maths VI (RAK)	Maths VI - PK	Chemistry VI- N	Physics VI - AB	Maths V - RN	Maths VI - RAK
TUE	III Sem BSc MEC	Maths III - RN	Language Hin/Kan	DBMS (AC)	Lib	English	English/AE
	III Sem BSc PCM	Maths III - RN	Language Hin/Kan	Lib	Chemistry III- RG	English	English/AE
	V Sem BSc MEC	Maths VI (RAK)	Maths VI - PK	VP (LCB)	Electronics VI- JS	Java (NKV)	Electronics V - MM
	V Sem BSc PCM	Chemistry V- RG	Physics VI- AB	Chemistry VI - N	Physics V - MCV	Physics V - MCV	Chemistry VI - N
WED	III Sem BSc MEC	CSC -SE LCB	English	Electronics III - JS	Electronics III - JS	Maths III - RN	CSC -SE LCB
	III Sem BSc PCM	Physics III - AB	English	Chemistry III - RG	Chemistry III - RG	Maths III - RN	Physics III - AB
	V Sem BSc MEC	Maths VI - RAK	VP (LCB)	VP (LCB)	Lib	Java (NKV)	Electronics VI- JS
	V Sem BSc PCM	Chemistry V- RG	Maths V - RN	Maths VI - RAK	Physics V- MCV	Physics VI - AB	Chemistry V- RG
THU	III Sem BSc MEC	DBMS- AC	Language Hin/Kan	Electronics III - JS	Maths III - RN	Maths III - RN	Language Hin/Kan
	III Sem BSc PCM	Physics III - AB	Language Hin/Kan	Chemistry III - RG	Maths III - RN	Maths III - RN	Language Hin/Kan
	V Sem BSc MEC	Java (NKV)	Electronics V - MM	Java (NKV)	Electronics VI- JS	Electronics VI- JS	Maths V - PK
	V Sem BSc PCM	Chemistry VI- N	Physics VI - AB	Maths VI - RAK	Chemistry V- RG	Physics VI -AB	Maths V - PK
FRI	III Sem BSc MEC	Maths III - RN	CSC -SE LCB	Language Hin/Kan	Electronics III- JS	Electronics III- JS	DBMS- AC
	III Sem BSc PCM	Maths III - RN	Chemistry III- RG	Language Hin/Kan	Physics III - AB	Physics III - AB	Chemistry III- RG
	V Sem BSc MEC	Maths V (PK)	Library	Electronics V - MM	Electronics V - MM	VP (LCB)	Java (NKV)
	V Sem BSc PCM	Chemistry VI- N	Physics V- MCV	Chemistry VI- N	Maths VI - PK	Maths V- RN	Physics V- MCV
SAT	III Sem BSc MEC	Maths III - RN	English	CSC -SE LCB	Electronics III- JS	NCP- MM	
	III Sem BSc PCM	Maths III - RN	English	Chemistry III- RG	Physics III - AB	NCP- MM	
	V Sem BSc MEC	Electronics VI- JS	VP (LCB) -L1	Maths V - RN	VP (LCB)	NCP	
	V Sem BSc PCM	Maths VI - RAK	Chemistry VI- N	Physics V- MCV	Maths V - RN	NCP	


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Day	Class/ Section	8.15 am – 9.10	9.10 am – 10.05	10.45am – 11.40	11.40 am – 12.3	12.30 pm – 1.20	1.20 pm-02.10 pm
Mon	II Sem BSc A	English (409)	E2-MM (410)	E1-MM (410)	CS-NKV- L1	CS-NKV- L1	OE
	II Sem BSc B	English (409)	CC- N (107)	PSY1 (107)	CS-NKV- L1	CS-NKV- L1	OE
	II Sem BSc C	English (409)	CC-N (107)	MATHS- RAK (4)	CS-NKV- L1	CS-NKV- L1	OE
	IV Sem BSc	English (409)	PHY 2-MCV (40)	MATHS- RAK (4)	LIB	Health & Wellne	OE
	VI Sem BSc MEC		CC-N (107)	MATHS- RAK (4)	CHE LAB-N	CHE1 LAB-N	OE
	VI Sem BSc PCM		PHY 2-MCV (40)	Lab Activity - IA	CHE LAB-N	CHE1 LAB-N	OE
Tue	II Sem BSc A	CS-NKV (410)	OMT - JS	E LAB-MM	E1 LAB-MM	Language Hin (3)	OE
	II Sem BSc B	CS-NKV (410)	OMT - JS	PSY (107)	LIB	Language Hin (3)	OE
	II Sem BSc C	CS-NKV (410)	OMT - JS	MATHS I LAB- R	MATHS I LAB- R	Language Hin (3)	OE
	IV Sem BSc	LIB	Digital Fluency	MATHS I LAB- R	MATHS I LAB- R	Language Hin (3)	OE
	VI Sem BSc MEC	CHE -N (409)	Digital Fluency	MATHS I LAB- R	MATHS I LAB- RAK		OE
	VI Sem BSc PCM	CHE -N (409)	Digital Fluency	CC-PK (409)	LIB		OE
Wed	II Sem BSc A	E LAB-MM	E LAB-MM	CS-NKV (410)	Language Hin (3)	English (409)	OMT-RAK
	II Sem BSc B	PSY 1 LAB	PSY 1 LAB	CS-NKV (410)	Language Hin (3)	English (409)	OMT-RAK
	II Sem BSc C		LIB	CS-NKV (410)	Language Hin (3)	English (409)	OMT-RAK
	IV Sem BSc		LIB	LIB	Language Hin (3)	English (409)	PHY 1-MCV (409)
	VI Sem BSc MEC	CHE LAB-N	CHE LAB-N	CHE 1-N (409)			Lib
	VI Sem BSc PCM	CHE LAB-N	CHE LAB-N	CHE 1-N (409)			PHY 1-MCV (409)
Thu	II Sem BSc A	E1-MM (410)	CS-NKV (410)	English (409)	CC- MM (410)	Language Hin (3)	EC/CC
	II Sem BSc B	PSY1 (107)	CS-NKV (410)	English (409)	CC- MM (410)	Language Hin (3)	EC/CC
	II Sem BSc C	LIB	CS-NKV (410)	English (409)	MATHS- RAK (4)	Language Hin (3)	EC/CC
	IV Sem BSc	PHY LAB -MCV	PHY LAB -MCV	English (409)	MATHS- RAK (4)	Language Hin (3)	EC/CC
	VI Sem BSc MEC	LIB	CHE -N (409)		MATHS- RAK (410)		
	VI Sem BSc PCM	PHY LAB -MCV	PHY 1 LAB -MCV		CHE -N (409)		
Fri	II Sem BSc A	E1-MM (410)	CS-NKV (410)	English (409)	OMT-JS	Seminar- NKV (4)	Language Hin (312) /Kan (409)
	II Sem BSc B	PSY1 (107)	CS-NKV (410)	English (409)	OMT-JS	Seminar- NKV (4)	Language Hin (312) /Kan (409)
	II Sem BSc C	MATHS- RAK (4)	CS-NKV (410)	English (409)	MATHS I LAB- R	MATHS I LAB- R	Language Hin (312) /Kan (409)
	IV Sem BSc	MATHS- RAK (4)	Lib	English (409)	MATHS I LAB- R	MATHS I LAB- R	Language Hin (312) /Kan (409)
	VI Sem BSc MEC	MATHS- RAK (4)	Digital Fluency- RN		MATHS I LAB- R	MATHS I LAB- RAK	
	VI Sem BSc PCM	Health & Wellne	Digital Fluency- RN		Lib	Seminar - MCV (409)	
Sat	II Sem BSc A	CS-NKV- L1	Seminar-MM (4)	OE	CS-NKV- L1	Health & Wellness/Yoga- AB	
	II Sem BSc B	CS-NKV- L1	Activity - AS (La)	OE	CS-NKV- L1	Health & Wellness/Yoga- AB	
	II Sem BSc C	CS-NKV- L1	MATHS- RAK (4)	OE	CS-NKV- L1	Health & Wellness/Yoga- AB	
	IV Sem BSc	PHY 1-MCV (40)	MATHS- RAK (4)	OE	PHY 1 LAB -MCV	PHY 1 LAB -MCV	
	VI Sem BSc MEC	CHE 1-N (409)	MATHS- RAK (4)	OE	LIB		
	VI Sem BSc PCM	PHY 1-MCV (40)	CHE 1-N (409)	OE	PHY 1 LAB -MCV		

DEPARTMENT OF SCIENCE
REMEDIAL CLASS REPORT

Faculty : Pandikani

SUBJECT: MATHEMATICS VII

VI Sem PCM & MEC

Remedial classes during the academic year 2021-22 was conducted as per the following tin

Sl No	Roll No	Name of the student	Dates	
			16/9	17/9
1	19PCM003K	Arun.M	P	P
2	19PCM004E	Ashish Robin	P	P
3	19PCM009K	Chandana	P	P
4	19PCM011K	Devi.P	P	P
5	19PCM012K	Jackwin.J	A	P
6	19PCM017K	Dundaiah.M	P	P
7	19PCM018E	Malika arjun.K	P	P
8	19PCM022K	Santhosha	P	P
9	19PCM025k	Tharun.V	P	P
10	19PCM028T	Velu.S	P	P
11	19PCM036K	Chayasree	P	P
12	19PCM1037E	Ringku Mushahary	A	P
13	19MEC006K	Hithesh	P	P
14	19MEC008TA	Manoj Kumar	P	P
15	19MEC010K	Punitha	P	P
16	19MEC012K	Sandhya	P	P
17	19MEC014H	Sanjay Singh	A	P
18	19MEC017K	Souder.R	P	P
19	19MEC019K	Sujin Paul	P	P
20	19MEC020K	Sumiksha	P	P
21	19MEC022K	Yogasathish.S	A	P
22	19MEC024K	Rashmi	A	P

The details of the activities conducted is as follows:

S.No	Date	Total Students	presentees	Absentees
1	16/9/22	22	17	5
2	17/9/22	22	22	0

SUBJECT: BUSINESS MATHEMATICS -II(OE)


Remedial classes during the academic year 2021-22 was conducted as per the following tin

		Name of the	Dates
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Sl. No.	Roll No.	student	20/9	21/9
1	21D002H	Abhijith	P	P
2	21D003K	Akshatha	P	P
3	21D009K	Bhimana Gowda.Y	P	P
4	21D022K	Nagesh.K	P	P
5	21D023H	Nidhin.V.Rajesh	P	P
6	21D032K	Sherwin Antony	P	P
7	21D033H	Shikha	P	P
8	21D048TA	Sreeharan.M	P	P
9	21D059H	Ravi kumar	P	P
10	21D061K	Sam Ephreim	P	P
11	21D062H	Ankith Roy	P	P
12	21D063K	Akshay.D	P	A

The details of the activities conducted is as follows:

S.No	Date	Total Students	presentees	Absentees
1	20/9/22	12	12	0
2	21/9/23	12	11	1
3	23/9/24	12	11	1
4	24/9/25	12	11	1
5	24/9/26	12	11	1


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**DEPARTMENT OF SCIENCE
 REMEDIAL CLASS REPORT**

SUBJECT: ELECTRONICS IV(MEC)

FACULTY MEMBER: JENIFER SUJITHA G

The remedial classes during the academic year 2021-22 was conducted as per the following time table

Sl. No	Roll No.	Name of the student	Dates			
			10/09/2022	11/09/2022	16/09/2022	17/09/2022
1	20MEC005TE	Malles N	P	P	P	P
2	20MEC014K	Hamsaveni M	P	P	P	P
3	20MEC003K	Harsha kumar V	P	P	P	P
4	20MEC006K	Manikanta R	P	P	P	P
5	20MEC010K	Harshith S	P	P	P	P

The details of the activities conducted is as follows:

S No	Date	Total Students	presentees	No. of Absentees	Activity
1	10/09/2022	5	5	nil	Revised the
2	11/09/2022	5	5	nil	Revised the
3	16/09/2022	5	5	nil	Solved the
4	17/09/2022	5	5	nil	Solved the

SUBJECT: ELECTRONICS VII

The remedial classes during the academic year 2021-22 was conducted as per the following time table.

Sl. No	Roll No.	Name of the student	Dates			
			16-09-2022	17-09-2022		
1	19MEC008TA	Manoj Kumar	P	P		
2	19MEC010K	Punitha	P	P		
3	19MEC014H	Sanjay Singh	P	P		
4	19MEC017K	Sounder R	P	P		
5	19MEC019K	Sujin Paul	P	P		
6	19MEC020K	Sumiksha	P	P		
7	19MEC022K	Yogasathish.S	P	P		
8	19MEC024K	Rashmi	P	P		

The details of the activities conducted is as follows:

S No	Date	Total Students	presentees	No. of Absentees	Activity
1	16-09-2022	8	8	0	Solved previous
2	17-09-2022	8	8	0	Revised


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DEPARTMENT OF SCIENCE REMEDIAL CLASS REPORT

SUBJECT: MATHEMATICS II

Faculty: Roshini Koshy

classes during the academic year 2021-22 was conducted as per the followi

Sl. No.	Roll No.	NAMES	Dates	
			22-09-2022	23-09-2022
1	21MC001K	B.G. BHARATH	P	P
2	21MC004K	SANKALPA. R	P	P
3	21CSM007K	SAI CHANDRA	P	P
4	21CSM009TE	YELLANKI DIVYA	P	P
5	21PM010K	LAVANYA.N	P	P

The details of the activities conducted is as follows:

S.No	Date	Total Students	presentees	Absentees
1	22-09-2022	5	5	0
2	23-09-2022	5	5	0
3	24-09-2022	5	5	0

SUBJECT: MATHEMATICS VIII

classes during the academic year 2021-22 was conducted as per the followi

Sl. No.	Roll No.	Name of the student	Dates	
			16-09-2022	17-09-2022
1	19MEC006K	Hithesh	P	P
2	19MEC008TA	Manoj Kumar	P	P
3	19MEC010K	Punitha	P	P
4	19MEC012K	Sandhya	P	P
5	19MEC014H	Sanjay Singh	P	P
6	19MEC017K	Sounder.R	P	P
7	19MEC019K	Sujin Paul	P	P
8	19MEC020K	Sumiksha	P	P
9	19MEC022K	Yogasathish.S	P	P
10	19MEC024K	Rashmi	P	P

The details of the activities conducted is as follows:

S No	Date	Total Students	presentees	Absentees
1	16-09-2022	10	10	0
2	17-09-2022	10	10	0

SUBJECT: MATHEMATICS II (OE)

classes during the academic year 2021-22 was conducted as per the followi

Sl. No.	Roll No.	Name of the student	Dates	
			22-09-2022	23-09-2022
1	21CSEL002K	NISHAND. S	P	A
2	21CSEL004TA	PURUSHOTAMA	A	P
3	21CSEL006K	ROSHAN	P	A
4	21CSEL007K	SIDESH. P	P	A
5	21CSEL009K	SUMAN KUMAR	A	P
6	21CSEL010K	BHARATH. Y	P	A
7	21CSEL011TA	SUSHMITHA R	A	P
8	21CSEL012TA	YESHWANTH.S	P	A
9	21CSEL013K	GANESH .M	A	P
10	21CSEL044K	SATISH KUMAR K	P	A
11	21CSEL031H	SHRAVAN KARTH	P	A
12	21CP001K	ASHWINI M.N	P	P
13	21CPOO7TA	PRAVEEN KUMAR	P	P
14	21PC005TE	SURA LAKSHMI T	A	P

The details of the activities conducted is as follows:

S.No	Date	Total Students	presentees	Absentees
1	22-09-2022	14	9	5
2	23-09-2022	14	7	7


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DEPARTMENT OF SCIENCE REMEDIAL CLASS REPORT

SUBJECT: MATHEMATICS IV(PCM & MEC)

Faculty: *Rashmi N*

Remedial classes during the academic year 2021-22 was conducted as per the following tim

Sl. No.	Roll No.	Name of the student	Dates	
			10/09/2022	14/09/2022
1	20MEC005TE	Malles N	A	P
2	20MEC014K	Hamsaveni M	P	P
3	20PCM002H	Ancy E S	A	P
4	20PCM003K	Ankush S	P	P
5	20PCM005K	Benitto Prakash A	A	P
6	20PCM010TA	Raju A	P	P
7	20PCM016TA	Bhenny Sam S	A	P

The details of the activities conducted is as follows:

S.No	Date	Total Students	presentees	Absentees
1	10/09/2022	7	3	4
2	14/09/2022	7	7	0
3	16/09/2022	7	6	1
4	17/09/2022	7	4	3

SUBJECT: MATHEMATICS VIII(PCM)

Remedial classes during the academic year 2021-22 was conducted as per the following tim

Sl. No.	Roll No.	Name of the student	Dates	
			16/09/2022	17/09/2022
1	19PCM003K	Arun M	P	P
2	19PCM011K	Devi P	P	P
3	19PCM012K	Jackwin	P	P
4	19PCM017K	M Dundaiah	A	P
5	19PCM018E	Mallikarjun K	A	P
6	19PCM022K	Santhosha	P	P
7	19PCM025K	V Tharun	P	P
8	19PCM028T	Velu S	P	P

The details of the activities conducted is as follows:

S No	Date	Total Students	presentees	Absentees
1	16/09/2022	8	6	2

2	17/09/2022	8	8	0


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**DEPARTMENT OF SCIENCE
REMEDIAL CLASS REPORT**

SUBJECT: ELECTRONICS IV(MEC)

FACULTY MEMBER

The remedial classes during the academic year 2021-22 was conducted as per the following t

Sl No	Roll No.	Name of the student	Dates		
			10/09/2022	11/09/2022	16/09/2022
1	20MEC005TE	Mallesh N	P	P	P
2	20MEC014K	Hamsaveni M	P	P	P
3	20MEC003K	Harsha kumar	P	P	P
4	20MEC006K	Manikanta R	P	P	P
5	20MEC010K	Harshith S	P	P	P

The details of the activities conducted is as follows:

S No	Date	Total Students	presentees	Absentees	Activity
1	10/09/2022	5	5	nil	Revised the
2	11/09/2022	5	5	nil	Revised the
3	16/09/2022	5	5	nil	Solved the
4	17/09/2022	5	5	nil	Solved the

SUBJECT: ELECTRONICS VII

The remedial classes during the academic year 2021-22 was conducted as per the following t

Sl. No.	Roll No.	Name of the student	Dates		
			16-09-2022	17-09-2022	
1	19MEC008TA	Manoj Kumar	P	P	
2	19MEC010K	Punitha	P	P	
3	19MEC014H	Sanjay Singh	P	P	
4	19MEC017K	Sounder.R	P	P	
5	19MEC019K	Sujin Paul	P	P	
6	19MEC020K	Sumiksha	P	P	
7	19MEC022K	Yogasathish.S	P	P	
8	19MEC024K	Rashmi	P	P	



The details of the activities conducted is as follows:

S No	Date	Total Students	presentees	Absentees	Activity
1	16-09-2022	8	8	0	Solved
2	17-09-2022	8	8	0	Revised

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23/09/2022

Remedial class
Even Semester 2021-22
Mathematics II

Sl. No.	Name of the student	no. of hours attended	Signature of the student
1.	Sankalp R	4hrs	
2.	B. G. Bhavath	4hr	


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- ① Derive Schrodinger wave Equation?
- ② Difference real gas & Ideal gases?
- ③ State the postulates of Quantum mechanics?

Answer

① The Physical state of the system of time (t) is described as wave function $\psi(x,t)$.

* The wave function $\psi(x,t)$ at 1st & 2nd derivatives
 $\frac{\partial \psi(x,t)}{\partial x}$ learn this.

* the allowed values of observable (A) are the eigen value of a_i .

* ~~the wave function is observable from or from the relation of $\langle A \rangle = \bar{A}$ and ψ is assumed values.~~

* $\hat{A} \psi = a_i \psi$ is known as eigen values.

* The wave function ($\psi(x,t)$) is the function equation.

* the average value (A) is observed from the relation $\langle A \rangle = \bar{A}$ and ψ is assumed to be normalised.

②. Ideal gas.

→ It obeys the Boy's law, Charles's law and Avogadro's law at all temperatures & pressure.

→ Volume occupied by molecules is negligible.

→ The force of attraction between the molecules.

Real gas.

→ It tends to obey the gas law from low pressure & high temperature.

→ It does not neglect

→ Attractive force between the gas molecules.

④. Consider the electron in an atom and its total energy E is given as.

$$E = T + V = \frac{1}{2}mv^2 + V = \frac{p^2}{2m} + V$$

$$E = \frac{p_x^2 + p_y^2 + p_z^2}{2m} + V \quad \text{--- (1)}$$

$$p_x \frac{\partial}{\partial x} = \frac{h}{2\pi i} \frac{\partial}{\partial x} \quad p_y = \frac{h}{2\pi i} \frac{\partial}{\partial y} \quad p_z = \frac{h}{2\pi i} \frac{\partial}{\partial z} + V$$

PV diagram for the same change in pressure and volume. Explain.

$$\frac{1}{2m} \left[\frac{h}{2\pi i} \frac{\partial}{\partial x} \right]^2 + \left[\frac{h}{2\pi i} \frac{\partial}{\partial y} \right]^2 + \left[\frac{h}{2\pi i} \frac{\partial}{\partial z} \right]^2 + V$$

$$\frac{h^2}{8\pi^2 i} \left[\frac{h}{2\pi i} \frac{\partial^2}{\partial x^2} \right] + \left[\frac{h}{2\pi i} \frac{\partial^2}{\partial y^2} \right] + \left[\frac{h}{2\pi i} \frac{\partial^2}{\partial z^2} \right] + V \quad \text{--- (2)}$$

$$\frac{\hbar^2}{8\pi^2 i} + \nabla^2 + V - \textcircled{3}$$

According to quantum mechanics.

$$= \hat{H}\psi + = \epsilon\psi - \textcircled{4}$$

$$= \frac{\hbar^2}{8\pi^2 i} + (\nabla^2 + V)\psi = \epsilon\psi$$

$$= \frac{\nabla^2}{\epsilon} + \textcircled{0} - \frac{8\pi^2 i}{\hbar^2} = \textcircled{[\psi = \psi]} = \underline{\underline{0}}$$

$$= \frac{\nabla^2}{\psi} + \frac{8\pi^2 i}{\hbar^2} = (\epsilon - V) = \underline{\underline{0}}$$

* Physical state of an system of time t is described by the wave function $\psi(x, t)$.

* the wave function $\psi(x, t)$ are 1st & 2nd derivatives

$$\frac{\partial \psi(x, t)}{\partial x} = \frac{\partial^2 \psi(x, t)}{\partial x^2} \text{ are continuous finite and single valued.}$$

$$\text{normalised } \int_{-\infty}^{\infty} \psi(x, t) \cdot \psi^*(x, t) dx = 1$$

* to every observable quantity in classical mechanics there corresponds a linear (\hat{A}).

$$\int \psi_j^* \hat{A} \psi_i dx = \int \psi_i^* \hat{A} \psi_j dx.$$

* the allowed values of an observable (A) are eigen value 'a_i'

$$[\hat{A} \psi_i = a_i \psi_i] \text{ also known as eigen values equation}$$

$[\psi_i]$ is eigen function.

* the average value $\langle A \rangle$ is observed from the relation $\langle A \rangle = \bar{A} = \int_{-\infty}^{\infty} \psi^* \hat{A} \psi dx$ where ψ is assumed to be normalised

* the wave function $[\psi(x, t)]$ is the function of equation.

$$\hat{A} \psi(x, t) = h \left[\frac{\partial^2 \psi(x, t)}{\partial x^2} \right]$$

Ruchitha T.

- 1) Derive Schrodinger wave Equation?
- 2) D/w Ideal gas and Real gas?
- 3) State the postulates of Quantum Mechanics?

→ Answers

3) * The physical state of an atom time t is described as $\psi(x,t)$

* The wave function $\psi(x,t)$, and the 1st and 2nd derivatives as $\frac{\partial \psi(x,t)}{\partial x}$, $\frac{\partial^2 \psi(x,t)}{\partial x^2}$ where as its singular.

$\frac{\partial \psi(x,t)}{\partial x}$, $\frac{\partial^2 \psi(x,t)}{\partial x^2}$ where as its singular.

and normalised at $\int_{-\infty}^{\infty} \psi^* \psi dx = 1$.

* The derived value of A is an observable and a_i is an Eigen value.

$$[\hat{A}\psi, A\psi_i] = [A\psi, a_i\psi]$$

* The value of A is an observable. and can be obtained as $[\hat{A}\psi, A\psi_i]$ as a_i is an Eigen value.

* The wave function of an Equation.

Repeat

*

2) Ideal gas

* A gas which obeys all Boyle's law, Charles law, Avagadro's law at temperature and pressure.

* Volume occupied by the ideal gas is negligible.

* No intermolecular force of attraction.

Real gas.

* A gas which obeys gas at decrease pressure and increase temperature

* Volume occupied by the real gas is not negligible.

* Attractive force between the gas molecules.

Consider an electron in an atom. The total energy of E is given by.

$$E = T + V = \frac{1}{2}mv^2 + V = \frac{p^2}{2m} + V.$$

$$E = \frac{p_x^2 + p_y^2 + p_z^2}{2m}$$

$$p_x = \frac{h}{2\pi i} \frac{\partial}{\partial x}, \quad p_y = \frac{h}{2\pi i} \frac{\partial}{\partial y}, \quad p_z = \frac{h}{2\pi i} \frac{\partial}{\partial z}$$

$$\hat{H} = \frac{h}{2m} \left[\left(\frac{h}{2\pi i} \frac{\partial}{\partial x} \right)^2 + \left(\frac{h}{2\pi i} \frac{\partial}{\partial y} \right)^2 + \left(\frac{h}{2\pi i} \frac{\partial}{\partial z} \right)^2 \right] + V$$

$$\hat{H} = \frac{-h^2}{8\pi^2 m} \left(\frac{\partial^2}{\partial x^2} + \frac{\partial^2}{\partial y^2} + \frac{\partial^2}{\partial z^2} \right) + V$$

$$\hat{H} = \frac{-h^2}{8\pi^2 m} \nabla^2 + V \quad \text{--- (3)}$$

According to Quantum Mechanics,

$$\hat{H} \psi - E \psi = 0 \quad \text{--- (4)}$$

$$= \frac{-h^2}{8\pi^2 m} \nabla^2 \psi + V \psi - E \psi = 0$$

$$\nabla^2 \psi + \frac{8\pi^2 m}{h^2} (E - V) \psi = 0$$

SI. No	Apparatus specification	Quantity	Receipt
			Date
			Bill of Break
			Balance
			Remarks
SI. No	Apparatus specification	Quantity	Receipt
			Date
			Bill of Break

3) * The physical state of an time t is described as $\psi(x, t)$

* The wave function $\psi(x, t)$ at the 1st and 2nd derivatives are $\frac{\partial \psi(x, t)}{\partial x}$, $\frac{\partial^2 \psi(x, t)}{\partial x^2}$ are single, continuous

and ~~no~~ normalised $\int_{-\infty}^{\infty} \psi^* \psi dx = 1$.

* To Every observable quantity of classical mechanics, the corresponding linear 'A' is Hermitian operator in Quantum Mechanics.

* The allowed values of the observable 'A' are the Eigen value 'a_i'

$$[A\psi, a_i\psi]$$

* The Average value of A is obtained ~~as~~ ^{from the} $[A\psi, a_i\psi]$
relation $\langle A \rangle = \bar{A} \Rightarrow \int_{-\infty}^{\infty} \psi^* A \psi dx$.

where ψ is assumed to be normalised.

* The wave function ($\psi(x, t)$) is the function of Equation.

$$\hat{H} \psi(x, t) = \hbar \left[\frac{\partial^2 \psi(x, t)}{\partial x^2} \right]$$

ans

Derive Schrodinger wave Eqn.

Sankalp P.

→ Consider an e⁻ in an atom. Its total energy E is described by:

$$E = T + V = \frac{1}{2}mv^2 = \frac{p^2}{2m} + V.$$

$$E = \frac{p_x^2}{2m} + \frac{p_y^2}{2m} + \frac{p_z^2}{2m} + V$$

$$p_x = \frac{\partial x \cdot h \cdot \pi i}{\partial m} \quad p_y = \frac{\partial y \cdot h \cdot \pi i}{\partial m} \quad p_z = \frac{\partial z \cdot h \cdot \pi i}{\partial m}$$

$$E = \frac{1}{2m} \left[\left(\frac{\partial x \cdot h \cdot \pi i}{\partial m} \right)^2 + \left(\frac{\partial y \cdot h \cdot \pi i}{\partial m} \right)^2 + \left(\frac{\partial z \cdot h \cdot \pi i}{\partial m} \right)^2 \right] + V.$$

$$E = \frac{h^2 \nabla^2}{8m\pi^2} + V$$

$$\hat{H}\psi = E\psi.$$

$$\hat{H} = -\frac{h^2 \nabla^2}{8m\pi^2} + V.$$

$$= -\frac{h^2 \nabla^2}{8m\pi^2} \psi + V \psi.$$

$$\left(-\frac{h^2 \nabla^2}{8m\pi^2} + V \right) \psi = (E - 0) \psi$$

$$-\frac{h^2 \nabla^2}{8m\pi^2} \psi + (E - V) \psi = 0$$

2.

Ideal Gas

- It obeys all gas laws
- Volume occupied by gas molecule is negligible
- No intermolecular attraction force
- It is hypothetical

Real Gas

It tends to obey only at low pressure & high temp.

Volume occupied by gas molecule is not negligible

Attraction force b/w gas molecules are appreciable due to which pressure is less than i.e. calculated using calculator

All gases are real gases.

Sl. No	Apparatus	Specification	Receipt		Bills of Break	Balance	Remarks	Sl. No	Apparatus	Specification	Receipt		Bills of Break
			Quantity	Date							Quantity	Date	

3. Postulates.

P-1: The physical state of the system at time t is described as $\psi(x,t)$.

P-2: The wavefunction $\psi(x,t)$ & its 1st & 2nd derivatives $\frac{\partial \psi(x,t)}{\partial x}$, $\frac{\partial^2 \psi(x,t)}{\partial x^2}$ are continuous finite & single. It is normalized. $\int \psi(x,t) \psi^*(x,t) dx = 1$.

P-3: All observable of classical mechanics are corresponds to linear hermitian operator.

P-4: The average value $\langle A \rangle$ or \bar{A} are the Eigen value i.e. $\hat{A} \psi = a \psi$. There are known an Eigen value & ψ is the Eigen function.

P-5:

P-6: The quantum mechanical ~~are~~ corresponds to the classical expression operators that constructs the classical expression in terms of variables & converted to Operator.

P-7: The wavefunction $\psi(x,t)$ is the Eigen function. i.e. $\hat{H} \psi(x,t) = E \psi(x,t)$ where $\hat{H} = -\frac{\hbar^2}{2m} \frac{\partial^2}{\partial x^2} + V(x,t)$.

① Derive schrodinger wave equation.

$$E = T + V$$

$$= \frac{1}{2} mv^2 + V$$

$$= \frac{p^2}{2m} + V$$

$$E = \frac{p_x^2 + p_y^2 + p_z^2}{2m} + V \quad \text{--- ①}$$

$$p_x = \frac{h}{2\pi i} \frac{\partial}{\partial x}, \quad p_y = \frac{h}{2\pi i} \frac{\partial}{\partial y}, \quad p_z = \frac{h}{2\pi i} \frac{\partial}{\partial z}$$

and $V \rightarrow V$

$$\hat{H} = \frac{1}{2m} \left\{ \left(\frac{h}{2\pi i} \frac{\partial}{\partial x} \right)^2 + \left(\frac{h}{2\pi i} \frac{\partial}{\partial y} \right)^2 + \left(\frac{h}{2\pi i} \frac{\partial}{\partial z} \right)^2 \right\} + V$$

$$= \frac{h^2}{8\pi^2 m} \left(\frac{\partial^2}{\partial x^2} + \frac{\partial^2}{\partial y^2} + \frac{\partial^2}{\partial z^2} \right) + V. \quad \text{--- ②}$$

or

$$\hat{H} = \frac{-h^2}{8\pi^2 m} \nabla^2 + V. \quad \text{--- ③}$$

According to quantum postulate

$$\hat{H}\psi = E\psi \quad \text{--- ④}$$

$$\left(\frac{-h^2}{8\pi^2 m} \nabla^2 + V \right) \psi = E\psi.$$

$$\nabla^2 \psi + \frac{8\pi^2 m}{h^2} (E - V) \psi = 0 //$$

② Differentiate real and ideal gas.

Real gas

ideal gas

- | | |
|---|--|
| ⊗ gases have volume | ⊗ gas have no volume |
| ⊗ intermolecular forces b/w particles | ⊗ no inter molecular forces b/w particles. |
| ⊗ not hypothetical | ⊗ it is hypothetical. |
| ⊗ Volume occupied by gas molecule is not negligible | ⊗ Volume occupied by gas molecule is negligible. |

③ state postulate of Quantum mech^t.

consider a particle moving in one direction.

Postulate ①:- The physical state of system at time t is described by wave function

$$\psi(x,t)$$

Postulate ②:- The wave function $\psi(x,t)$ and its 1st and 2nd derivatives $\frac{\partial \psi(x,t)}{\partial x}$, $\frac{\partial^2 \psi(x,t)}{\partial x^2}$ is continuous finite and single value is normalised.

Postulate ③:-

The every observable Quantity in classical mech^t, The corresponding linear Hermitian Operator (\hat{A}) in Quantum mech^t.

Postulate (4) :- The allowed values of an observable is eigen value a_i .

$$\text{i.e., } \hat{A}\psi_i = a_i\psi_i$$

Postulate (5) :-

The average value $\langle A \rangle$ is obtained from relation $\langle A \rangle = \bar{A} = \int_{-\infty}^{\infty} \psi^* \hat{A} \psi$.

When ψ is assumed to be normalised.

Postulate (6) :-

The wave function $\psi(x,t)$ is a function of equation

$$\hat{H}\psi(x,t) = h \left[\frac{\partial \psi(x,t)}{\partial x} \right]$$

Ans