

# **Additional Information for Metric No. 2.5.1**

# **2.5.1Mechanism of internal assessment is transparent and robust in terms of frequency and mode.**

# **INDEX**

Sr. No.	Title	Page No.
1	ISO 9001:2015 academic process manual	2
1.	Internal Exam Time Table	3
2.	Internal Exam Question paper	8
3.	Internal Exam Attendance sheet	10
4.	Internal marks with signs	12
5.	Assignment Submission	13
6.	Seminars Conducted	22



# ISO 9001:2015 academic process manual clause no ACA.PR/06



Mula Education Society's Arts, Commerce & Science College, Sonai ISO 9001: 2015 ACADEMIC PROCESS MANUAL

ACA/PR/06 Conduction of Internal, Midterm / Term-end Exami			
Rev.: 00 Date: 15.06.201	8	Clause: 8.5.1, 8.6	Page: 01 / 01

Input Brief abstracts, Time table, Syllabus coverage.

Sr. No.	Activity	Owner	Process Out put
1	Decide schedule for conduction of Internal, Midterm / Term- end examination	CEO	Faculty wise Examination Schedule
2	Issuing the notice of timetable to students	CEO	Notice
3	Preparation of examination's stationery	CEO	Stationery
4	Setting the question paper	Faculty	Question paper
5	Conduction of examination as per schedule	HoD	
6	Assessment of the paper and preparation of results	Faculty	
7	Communicate, Display and obtain acknowledgement of results from students	HoD & Faculty	Result sheet

Output Identification of improvement areas and remedial measures

		Process Monitoring & M	easurement		
Parameter	Indicator	Measurement Methodology	Frequency of Monitoring	Responsibility	Documented information
Execution of Internal, Midterm / Term-end as per schedule	Plan V/s actual	Plan V/s actual of Internal, Midterm / Term-end	After every exams	CEO / HOD	Academic Calendar



Ph.: 02427-231384 Email: sonaicollege@yahoo.co.in, mesacsccollege@gmail.com Website:www.acssonaicollege.com Affiliated to Savitribai Phule Pune University, Pune (I.D.PU/AN/ASC/031/1989) NAAC Re-accredited with 'A' Grade, DBT Star College Scheme, ISO 9001: 2015 Certified, AISHE Code – C-42096

# 1. Internal Exam Time Table (sample copy)

Mula Education Society's Arts, Commerce & Science College, Sonai. Department of Examination					
ACA - R-28	Test Time Table	Academic Year: 2022-23			
Rev : 00 Date: 15.06.2018	(Internal Assessment Test / Terminal Exam / Tutorial)	Annual Semester:			
Ref: MES ACSC ACA		Date: 41111202			

All the students of FY/SY/TY B.A. are hereby informed that the following is the schedule for the Internal Test- Semester I to be conducted from 14/11/2022 to 19/11/2022. All Students should remain present compulsorily.

All Lectures will be conducted as per the time table except the test Period .

Day and Date	Class	Period I 8-00 to 8-50	Period II 8-50 to 9-40	Period 111 9-50 to 10-40	Period IV 10-40 to 11- 30
	F.Y.B A	Marathi			
14/11/2022	S. Y. B. A.		History G2		All SEC-1
	T. Y. B. A		Geography G3		Hindi G3 Eco -G3
15/11/2022	F.Y.B A		Political Science		
	S. Y. B. A.	All.SEC/S 1			Political Science G2
	Т. Ү. В. А	History G 3	All DSE3/S3		English G.3
16/11/2022	F.Y.B A	Com. English		022222	
	S. Y. B. A.		Marathi G.2		English G.2
	T. Y. B. A				
17/11/2022	F.Y.B A	Hindi g- 1/Eco G.1		Opp.English	
	S. Y. B. A.	DSE /S2			Hindi G2/Eco G2
	T. Y. B. A	Com. English			
18/11/2022	F.Y.B A			Geography G1	
	S. Y. B. A.			Geography G2	
	T. Y. B. A		DSE./S4		Political Science G3
19/11/2022	F.Y.BA		History G.1		
17.11.2022	S. Y. B. A.		Com .English		
	T. Y. B. A			Marathi G3	

CEO

Mula Education Society's Art's Commerce & Science College Senal fai Newse Cot Almicences Fin 414105

PRINCIPAL Mula Education Socie 'y's Arts Commune & Science College, Sonal Tal Newasa Dist Ahmednagar Pin 414105



Ph.: 02427-231384 Email: sonaicollege@yahoo.co.in, mesacsccollege@gmail.com Website:www.acssonaicollege.com Affiliated to Savitribai Phule Pune University, Pune (I.D.PU/AN/ASC/031/1989) NAAC Re-accredited with 'A' Grade, DBT Star College Scheme, ISO 9001: 2015 Certified, AISHE Code – C-42096

### Mula Education Society's Arts, Commerce & Science College, Sonai Time table of Internal Examination for B.Sc. Nov. 2022

#### Semester I/III/V

Day & Date	Class	Period 1 8.00-8.50	Period 11 8.50-9.40	Period III 9.50-10.40	Period IV 10.40-11.30
Monday	FYBSc	Zoo-I/ Maths-I	Zoo-II/ Maths-II		
14.11.2022	SYBSc		220	Che-1	Che – II
	TYBSc		-	Paper – I	Paper – II
Tuesday	FYBSc	Phy – I/ Geo – I	Phy – II/ Geo – II		
15.11.2022	SYBSc			Bot – I/ Maths – I	Bot – II/ Maths –II
	TYBSc		31 <sub>88</sub> 3	Paper - III	Paper - IV
	FYBSc	Che – I	Che – II		
Wednesday	SYBSc		**:	Geo - I	Geo - II
16.11.2022	TYBSc		*	Paper - V	Paper – VI
	FYBSc	Bot -1	Bot-II		(100)
Thursday 17.11.2022	SYBSe		1	Zoo – I/ Phy – I	Zoo – II/ Phy – II-
	TYBSc	(75)	T	SEC-I	SEC – II
Friday 18.11.2022	SYBSc	Marathi/ English	-		

Important instructions:

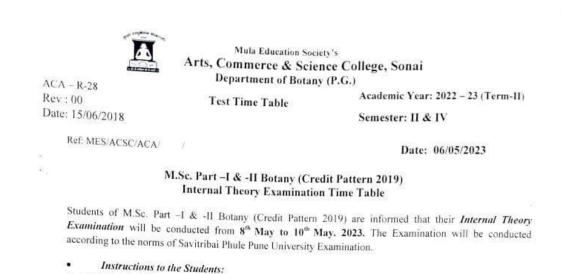
- 1) It is compulsory to all the students to attend internal examination as per above time table, as there will be no second internal examination.
- 2) The obtained marks in above internal examination will be treated final and submitted to University.
- 3) All the papers will be of 10 marks each.
- 4) Answers are to be written on the question paper itself.
- 5) Pattern of question paper will be as per guidelines of University.
- 6) For any clarification, students should contact their subject teachers.
- The examination will be held in regular classrooms.



PRINCIPA Mula Education Socie., 's Arts, Commerce & Science College, Sonai Tal.Newasa.Dist.Ahmednagar Pin 414105



Ph.: 02427-231384 Email: sonaicollege@yahoo.co.in, mesacsccollege@gmail.com Website:www.acssonaicollege.com Affiliated to Savitribai Phule Pune University, Pune (I.D.PU/AN/ASC/031/1989) NAAC Re-accredited with 'A' Grade, DBT Star College Scheme, ISO 9001: 2015 Certified, AISHE Code – C-42096



- Students should be present half an hour before the exam.
- Students will not be allowed for exam without Identity card & dress code.
- No Rexam will be conducted for the absent students.
- Examination will be of 10 marks; Time: 1 hr.

#### Pattern of Question Paper:

)

Each paper of 10 marks and the pattern of question paper shall be:

Question 1 (1 Marks)	5 compulsory sub-questions, each of 1 mark; (such as define, short problem, / neat labeled diagram, short reasons, characteristics, applications, etc.)
Question 2 (2.5	2 out of 3 -descriptive answer type questions of 2.5 marks each; answerable in sufficient length like write notes

Sr. No.	Date	Time	M.ScI	M.ScII
1	08/05/2023	10.00 am to 11.00 am	BOUT 121 (Plant Systematic II)	BOUT 241 (Botanica Techniques)
125	00/03/2023	11.00 am to 12.00 noon	BOUT 122 (Molecular Biology)	BOUT 241 (Advance Ecology)
2		10.00 am to 11.00 am	BOUT 123 (Biochemistry)	BODT 243 (Seed Technology)
3	09/05/2023	10.00 am to 12.00 noon	BODT 124 b (Mushroom Cultivation and Bio- pesticide technology)	BODT 244 (Plant Tissue culture technology)
4	10/05/2023	12.00 pm to 01.00 pm	Cyber Security - II	Cyber Security-IV
5	10/03/2023	02.00 pm to 03.00 pm	Human Rights - II	Skill Development-II

ina 2



C E O Mula Education Society s 1 rt s Commonto & Science College service Science 2 of a conspansion 414105

Ph.: 02427-231384 Email: sonaicollege@yahoo.co.in, mesacsccollege@gmail.com Website:www.acssonaicollege.com Affiliated to Savitribai Phule Pune University, Pune (I.D.PU/AN/ASC/031/1989) NAAC Re-accredited with 'A' Grade, DBT Star College Scheme, ISO 9001: 2015 Certified, AISHE Code – C-42096

#### Mula Education Society's Arts, Commerce & Science College, Sonai Time table of Internal Examination for B.Sc. (April 2023) Semester II/IV/VI

Day & Date	Class	Period I 8.00-8.50	Period II 8.50-9.40	Period III 9.50-10.40	Period IV 10.40-11.30
Wednesday	FYBSc	Zoo-I/ Maths-I	Zoo-II/ Maths-II		
26.04.2023	SYBSc		22	Che – I	Che – II
	TYBSc	Paper-1	Paper - II		( <del></del> )
Thursday 27.04.2023	FYBSc	Phy – 1/ Geo – 1	Phy – II/ Geo – II		1.777 ( ) 
27.04.2025	SYBSc	-		Bot – I/ Maths – I	Bot – II/ Maths –II
	TYBSc	Paper - III	Paper - IV		
	FYBSc	Che-I	Che – II		
Friday	SYBSc		227	Geo - I	Geo - II
28.04.2023	TYBSc	Paper - V	Paper - VI		
Saturday	FYBSc	Bot - I	Bot – II		
29.04.2023	SYBSc			Zoo – I/ Phy – I	Zoo – II/ Phy – II
	TYBSc	SEC - III	SEC-IV		**
Tuesday 02.05.2023	SYBSc	Marathi/ English	() <b></b> ()		-

)

Important instructions:

- It is compulsory to all the students to attend internal examination as per above time table, as there will be no second internal examination.
- The obtained marks in above internal examination will be treated final and submitted to University.
- 3) All the papers will be of 10 marks each.
- 4) Answers are to be written on the question paper itself.
- 5) Pattern of question paper will be as per rules of University.
- 6) For any clarification, students should contact their subject teachers.
- 7) The examination will be held in regular classrooms.

Hult Zoughtion Society's Art's, Commune C Science College Sensi, Tal Newssa, Dist Ahmedrager, Pin-410105

PRINCIPAL

Mula Education Society's Arts,Commerce & Science College,Sc Tal.Newasa,Dist.Ahmednagar Pm 414105

2

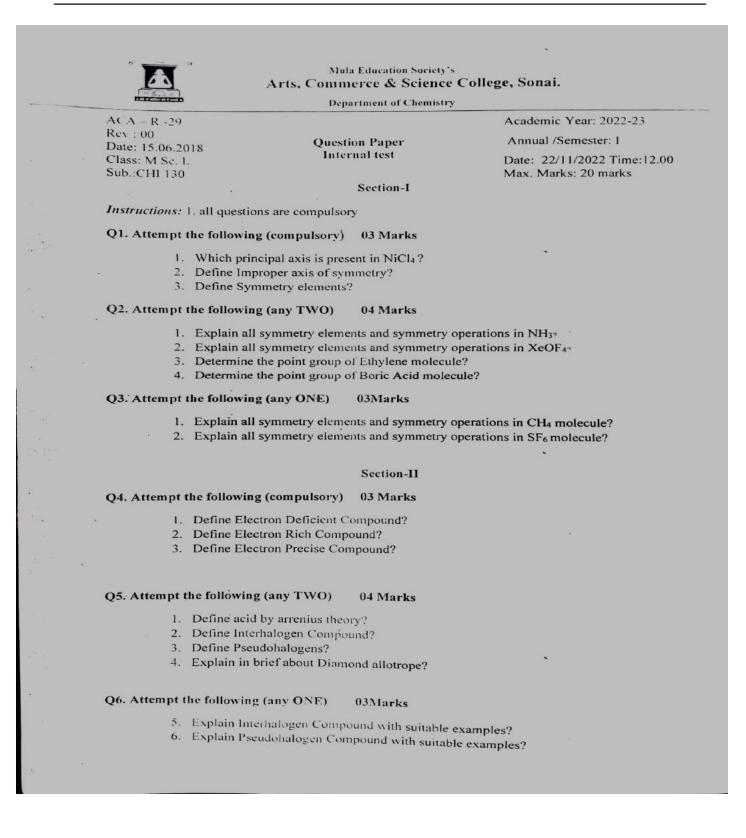
Ph.: 02427-231384 Email: sonaicollege@yahoo.co.in, mesacsccollege@gmail.com Website:www.acssonaicollege.com Affiliated to Savitribai Phule Pune University, Pune (I.D.PU/AN/ASC/031/1989) NAAC Re-accredited with 'A' Grade, DBT Star College Scheme, ISO 9001: 2015 Certified, AISHE Code - C-42096

# 2. Internal Exam Question paper (sample copy)

2-

63	Arts, Commerce & Science	Conege, Sonal
	Department of Chemistry	
ACA - R -29		Academic Year: 2022-23
Rev : 00 Date: 15.06.2018	Internal Test CHO-452A	Semester: II
Class: M.Sc. Organic Chemistry	Concepts and Applications of Medicinal Chemistry.	Date: 09/05/2023 Time: 12:00To :01:00
Sub.: CHO-452(A)		Max. Marks: 20
	Section - I	
Q.1) Define / Explain		3.M
1. Define: Protein.		
2. Define: Medicinal Ch	emistry	
3. Define: Coenzyme.		
Q.2) Write a Short Not	te On (Attempt any TWO)	4M
i) Protein as a biologica	I catalyst	
ii) Solid phase peptide s	ynthesis	
iii) Biological Applicati	on of Folic Acid	
iv) Write Hansch equati	on and explain terms involved in it.	
Q.3) Answer the Follo	wing (Attempt any One)	3M
i) Draw structure of oxa	mniquine and explain its mechanism	of action.
ii) Explain Proton Pump	Labilities.	





Ph.: 02427-231384 Email: sonaicollege@yahoo.co.in, mesacsccollege@gmail.com Website:www.acssonaicollege.com Affiliated to Savitribai Phule Pune University, Pune (I.D.PU/AN/ASC/031/1989) NAAC Re-accredited with 'A' Grade, DBT Star College Scheme, ISO 9001: 2015 Certified, AISHE Code – C-42096

# 3. Internal Exam Attendance sheet (sample copy)

14		Mula Education Society's Arts, Commerce & Science Colle Department of Physics	ege, Sonai.
Rev : Date:	- R -29 00 15.06.2018 ; M.Sc II		Academic Year: 2022-23 Annual /Semester: IV Time: 12:00 pm to 01:00 pm
	PHOT – 244H4 sy Studies - II	Internal Exam March/April - 2023	Marks: 10 Date :- 09 /05/2022

Sr. No.	Roll No.	Name of Student	Student Sign	Marks
1.	01	Aghade Rutuja Vilas	Arapado	05
2.	02	Barhate Rutuja Eknath	Bornate	05
3.	03	Darandale Uday Patilba	14	07
4.	04	Dhere Akash Bapurao	gue.	05
5.	05	Gade Ankita Shashikant	Oakta	06
6.	06	Gawali Shivani Jayant	An103.	06
7.	07	Ghodechor Dyaneshwari Namdev	attte	06
8.	08	Kajale Shital Abasaheb	Dajare	08
9.	09	Kardile Pranali Satish	Roghic	07
10.	10	Lande Pratiksha Dinkar	Kande !!	06
11.	11	Latpate Rushikesh Ramkisan	2audra .	07
12.	12	MisalVaishnavi Janardhan	Balennavi	05
13.	13	Sawai Sarita Mohan	Sunt	07
14.	14	Tekale Vaishnavi Sambhaji	Pelcaley	07
15.	15	Toge Ganesh Ashok	Tota	05
16.	16	Devtarse kaveri Babasaheb	Reif	08

Supervisor's Name		No. of Student	1	Sign
- apervisor s runne	Appeared	Present	Absent	
Miss. Darondale A.A.	16	16	00	Dorandale AA.

Test Co-ordinator



Subject Teacher Name		No.of Stude	nt	
	Pass	Fail	% Pass	Sign
Prof. Shinde R.S.	16	00	1007.	Par
				нор
. 494				

Ph.: 02427-231384 Email: sonaicollege@yahoo.co.in, mesacsccollege@gmail.com Website:www.acssonaicollege.com Affiliated to Savitribai Phule Pune University, Pune (I.D.PU/AN/ASC/031/1989) NAAC Re-accredited with 'A' Grade, DBT Star College Scheme, ISO 9001: 2015 Certified, AISHE Code - C-42096

1	Art		ducation Society' ce & Science		Sonai.		
-		Departn	ient of Chemist	ry			
Re Da Cl	ass: M.sc-	CHO- pts and Appl	< List 452(A) ication of Med nistry		Academic Yea Semester: IV	ar: 2022-2	3
	organic Chemistry) ab- CHO-452(A)				Max. Marks: 3	30	
Re	f: Ref: MES/ACSC/ACA/ /						
Sr. No.	Name of The students	Internal (Mark-10)	Seminar and PPT (Mark-10)	Assignme (Mark-5	Quize	Total (Out of 30)	Sigr
1.	AUTI MANISHA RAMKISAN	06	05	03	04.	18	Auty
2.	BACHKAR SACHIN ASHOK	04	04	03	05	16	Bacht
3.	BANKAR JAYASHRI BABASAHEB	07	08	04	05	24	Aug
4.	BANKAR PRATIKSHA RANGNATH	04	04	02	05	15	PECLIKE
5.	BELHEKAR VAISHNAVI RAMESH	06	04	03	05	18	VEB
6.	BHAGWAT MANGESH SANJAY	04	05	03	05	17	mayes
7.	BHALERAO SNEHAL VITTHAL	04	04	03	03	14	Endo
8.	BHAWAR SANKET VIJAY	04	07	04	05	20	ephai
9.	BORHADE MAYUR ASHOK.	04	07	04	05	20	MED
10.	CHAVAN SHUBHANGI NITIN	07	03	03	05	18	chave
11.	DAHATONDE RUTUJA SANJAY	04	04	03	04	15	But
12.	DARANDALE NAVNATH NAMDEV	04	04	02	03	13 -	puter
13.	DARANDALE VAIBHAV SUNIL	04	04	02	05	15	dry
14.	DESHMUKH AARTI RAJENDRA	06	08	04	05	23	Aut
15.	DEVHARE SAGAR GORAKSHNATH	04	02	02	04	12	Sela
16.	DHALE SAGAR ASHOK	06	04	03	05	18	Ahuese
17.	DHANWATE AKSHDA ANNASAHEB	07	08	04	05	24	Aug
18.	DHUMAL GAYATRI SANDIP	05	04	03	05	17 .	gayah
19.	GADAKH KSHITIJA ANIL	04	04	03	04	15	Balet
20.	GADAKH SHRIKRUSHNA SANJAY	04	03	02	05		Gueloth
21.	GADAKH SUDARSHAN BABASAHEB	04	03	02	05	14 (	Stada
22.	GAIKWAD SAURABH RAMESH	08	08	05	05	26	Bung
23.	GAIKWAD SHITAL BABASAHEB	eo	08	05	05	27 (	Poiku
24.	GITE RAHUL BHAGWAN	04	03	02	04	13	that

## **4.** Internal marks with signs (sample copy)



-		Depar	tment of Chemi	stry			
25.	GOSAVI MAHESH SUNIL	04	07	04	05	20	Nerker
26.	GUDADHE SHWETA MITTHU	05	06	04	03	18	Shuert
27.	JADHAV RUSHIKESH DHARMARAJ	04	03	03	04	14	Delle
28.	JARE DIGAMBAR BHAUSAHEB	04	04	03	05	16	Dire
29.	JARE PANKAJ BABASAHEB	04	03	00.	05	12	Cetul
30.	KALE SNEHAL SUBHASH	09	08	05	05	27	Sale
31.	KUNDE SHEETAL RAMRAO	08	08	04	05	25.	Reinde
32.	KURHE JAY'DIP DILIP	04	04	02	04	14	Fourt
33.	KURHE SAURABH ASHOK	04	05	03	05	16	Awith
34.	MAGAR PRAVIN HARIBHAU	05	05	04	04	18	Magarph
35.	MARADE ARPIT BANDU	05	05	05	05	20	Trigon
36.	MORE MANGESH BALASAHEB	04	04	60	04	12	MBS
37.	MORE PRATIKSHA SARJERAO	07	07	04	05	22	Astrop
38.	MUSMADE AMRUTA ASHOK	07	04	03	05	19	Are
39.	ROTHE SACHIN NANASAHEB	06	04	03	05	18	STRO-144
40.	SANAP AMOL BHAUSAHEB	04	03	02	04	13	tal
41.	SAPTE AMOL DNYANDEO	04	03	01	04	12	Balte
42.	SATRE MAHESH VISHNU	05	04	03	05	17	@tem'
43.	SHINDE SHUBHAM SADANAND	05	64	03	05	17	shubter
44.	SOMVANSHI NILAM GANESH	07	07	04	05	23	Nilas
45.	TARAWADE ARTI SANJAY	Ab	Ab	Ab	Ab	AL	-
46.	TODMAL GANESH DILIP	05	07	04	05	21	4 anesta
47.	TUWAR KIRAN RAMBHAU	05	07-	04	05	21	EPTUN
48.	WAGH VAISHNAVI BABASAHEB Walada Rabit Bander	m 04	04	02	02	12	Bite
49.	ZINE PRITI PRAKASH	04	04	03.	05	16	Peils



Ph.: 02427-231384 Email: sonaicollege@yahoo.co.in, mesacsccollege@gmail.com Website:www.acssonaicollege.com Affiliated to Savitribai Phule Pune University, Pune (I.D.PU/AN/ASC/031/1989) NAAC Re-accredited with 'A' Grade, DBT Star College Scheme, ISO 9001: 2015 Certified, AISHE Code – C-42096

	s, Commerce & So Department of C			
	1	No of students		Sign
Supervisor's Name	Appeared	Present	Absent	o.B.
Miss. Kank P. S.	49	48	01	Sign
Total	49	48	01	Kanites

0.11 J. T. 1. 31		No of students		Sign	
Subject Teacher Name	Pass	Fail	% Pass	Sign	1
Miss. Kank P. S.	48	01		Konlight.	

Verale Test Cooldinator

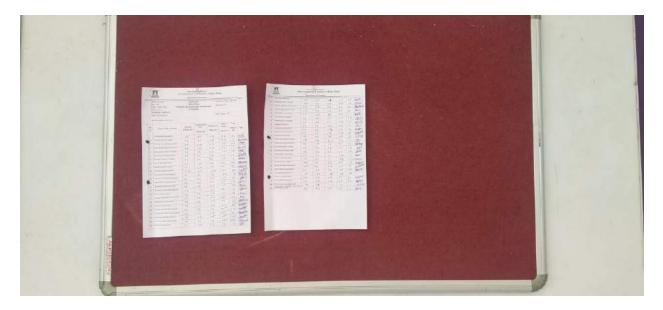
HOD

Head Department of Chemistry Arts, Commerce & Science College, Sonai, Tal. Newasa, Dist. Ahmednagar - 414105

.







Internal marks displayed on noticeboard



### Internal marks uploaded on university portal for final result

	7.2	E	xaminatio	n Session	e <b>University</b> n 2023 or Colleges	2	23062702512
6/27/2023							1
College Name	(	CAAA016340 - MI	ULA EDUC	ATION S	OCIETY'S ART	S, SCIE	NCE &
		COMMERCE COL			1201012-221		1000 100
Pattern Name		2519 - M.Sc. ORC REV.2019)	GANIC CH	EMISTRY	Batch No	20230	4088489
Subject Name	3	3423A - CBOP-4 MEDICINAL C	STORES CONTRACTOR	r	Exam Type	INTE 30	RNAL OUT O
Teacher Name	ŀ	Kank Pratiksha Sar	njay (Mob. 1	No.: 86250	18191) - Interna	l Exami	ner
	_						
Total Students	P	resent Students	Absent S	tudents	Not Applicat	ole	Detained
49		48	1		0		0
Seat No Marks/G	Grade	Seat No Marks	s/Grade				
334568	18	334593	16				
334569	16	334594	13				
334570	24	334595	27				
334571	15	334596	25				
334572	18	334597	15				
334573	17	334598	16				
334574	14	334599	18				
334575	20	334600	20				
334576	20	334601	13				
334577	18	334602	22				
334578	15	334603	19				
334579	14	334604	18				
334580	15	334605	13				
334581	23	334606	13				
334582	13	334607	17				
334583	18	334608	17				
334584	17	334609	23				
334585	15	334610	(AB)				
334586	14	334611	21				
334587	14	334612	21				
334588	26	334613	12				
334589	13	334614	16				
334590	20	334615	24				
	18	334616	27				1
334591 334592	15		1995		A		A

Head Department of Chemistry Arts.Commerce & Science College.Sonal,Tal Newasa, Dist.Ahmednagar - 414105 Stamp & Authorized Signatory



Ph.: 02427-231384 Email: sonaicollege@yahoo.co.in, mesacsccollege@gmail.com Website:www.acssonaicollege.com Affiliated to Savitribai Phule Pune University, Pune (I.D.PU/AN/ASC/031/1989) NAAC Re-accredited with 'A' Grade, DBT Star College Scheme, ISO 9001: 2015 Certified, AISHE Code – C-42096

## 5. Sample of Assignment Submission

	Assignment no 1	Page No :			Proger No : Dobo
Q. i)	Attempt the following.		Anso	Gn	en : til2 = 2.5 x 103 sec .
	the method and				$\mathcal{R} = \left(\frac{1}{5}\right)^{\pm h} = \left(\frac{1}{5} \times 100\right) = 20\%$
4)	State the Arrichensive equali	in and exclain the terms	topane	100	d.= 100
~	there in ?	to and explain the terms			K = 2'non de after
Ans-	The arrhenius eqn is.		-		- B - P - B - B - B - B - B - B - B - B
		II VIDE			k=0.693 = 0.693
	K - Ae	7	_		t112 8:5×103
	Where.	there is a second secon			$K = 2.772 \times 10^{-4}$
	K = rate of chemica	allows Allow			t 10 -2
/	A = Constant	a reaction			t - a-2
		-			k log a
	Ea = Activation ene	angy .		-	K 9-X
61	Distinguish bet" malaulari	lu and and p lite	_	1	= 2:303 log 100 2.742 ×10-4 log 100-20
Ans	Distinguish bet" moleculari	ty and order of reaction	: /		
	Molecularity	Or have		_	= 8:3080 × 10 5 log 100
	and and any	Order			and the second s
1	If The total no of atoms or	ALTE			2 2 30 80 X 10 5. log 10
-	molecules involved in the	t) The sum of exeponents	ba	4	= 8: 3080 x 10 5 - leg le
	chemical reaction is given	and power in the rate	-	mil.	E = 8.30 80 × 10-5
	by stiochiometric chemical	of reaction is called			an fumile the week strenged
	eq" is known as molecularity	order of reaction.	92]	AH	tempt of the following
ALL REAL PROPERTY.	of reaction .	and the second s			to the second se
antes 1	O sate in the second second	anter pa tran	4)	Ob	tain an expression for velocity constant of a 10t
2	a) at is an encertical	N 01	~	ord	er reaction at equilibrium in terms of rate
Samerica	a) at is an experimental.	3). It is an exeperimen-		coel	Priciente.
1.21	. property.	tal property.	Anso		Consider a general reaction,
	the second s	an aniw usis		T	$A \rightarrow \text{product}  t \circ a_{a},  t = t = x$
	a) Molecularity of real is	3) Order of reaction can		1	Let the initial conc of reactant A be a mole
				V	the thirtie diff. of reactant A be a male
	never zero Fractional	be zero or Function-		1	in conc of preduct at the ""
	it is always an integer.	al.		R	is conc. of product at time 1.
	it is always an integer.	al .		×	is conc. of product at time i.
	14 is always an integer. 4) Molecularity of rean does	al. 4) Order of reaction cha-		×	is conc. of product at time 1.
	it is always an integer.	al .		×	is conc. of product at time i.
	14 is always an integer. 4) Molecularity of rean does	al. 4) Order of reaction cha-		× ·	is conc. of product at time i.
	14 is always an integer. 4) Molecularity of rean does	al. 4) Order of reaction changes with atmospheric.		× ·	is conc. of product at time i.
	14 is always an integer. 4) Molecularity of rean does	al. 4) Order of reaction cha-		× ·	is conc. of product at time i.
	It is always an integer. <sup>4)</sup> Molecularity of rea <sup>n</sup> does not change with environ-	al. 4) Order of reaction changes with atmospheric.		× ·	is conc. of product at time t'. a-re'is be conc. of reactant at time t'. 
	It is always an integer. 4) Molecularity of rea <sup>n</sup> does not change with environ- Rate of reaction	al. 4) Order of reaction changes with atmospheric. Page No: Date = -d[A] = k [A]()		× ·	tel condition. Condition in geu phase red
	It is always an integer. 4) Molecularity of rea <sup>n</sup> does not change with environ- Rate of reaction	al. 4) Order of reaction changes with atmospheric. Physical = -d[A] = k [A]() dt reactant A with (a-x) weget		ж ТЋ	tel condition. Define consequentive and parallel reaction with suitable example?
	It is always an integer. A) Molecularity of rea <sup>n</sup> does not change with environ- Rate of reaction Substitute conc. of re rate of re -d cara	al. 4) Order of reaction changes with atmospheric = -d[A] = k [A]() dt reactant A with (a-x) weget ia <sup>n</sup> () = K.[a-x]		ж ТЋ	tel condition. Define consequative and parallel reaction with suitable example? Consequative reaction :-
	It is always an integer. 4) Molecularity of rea <sup>n</sup> does not change with environ- Rate of reaction Substitute conc. of reaction rate of reaction	al. 4) Order of reaction changes with atmospheric = -d[A] = k [A]() dt reactant A with (a-x) weget ia <sup>n</sup> () = K.[a-x]		ж. П.	tal condition. Define consequative and parallel reaction with suitable example? Consequative reaction : Bt is defined as reaction is proceed
	It is always an integer. 4) Molecularity of rea <sup>n</sup> does not change with environ- Rate of reaction is Substitute conc. of re rate of reaction - d ca-z , at - da +	al. 4) Order of reaction changes with atmospheric = -d[A] = k [A]() dt reactant A with (a-x) weget ca <sup>n</sup> c) = k. [a-x] ()		ж. П.	tel condition . Condition in gas phase red Define consequative and parallel reaction with switchie example? Consequative reaction : Bt is defined as reaction is proceed from reactant to product to one or more
	It is always an integer. Al Molecularity of rea <sup>n</sup> does not change with environ- Rate of reaction Substitute conc. of re rate of re -d ca , ot	al. 4) Order of reaction changes with atmospheric. Page No: and at at a straight atmospheric. Page No: and at at a straight atmospheric. Page No: and at at a straight atmospheric. at a straight at a st		ж. П.	tel condition . Condition in gas phase red Define consequative and parallel reaction with switchie example? Consequative reaction : Bt is defined as reaction is proceed from reactant to product to one or more
	It is always an integer. A) Molecularity of rea <sup>n</sup> does not change with environ- Rate of reaction Substitute conc. of re rate of re -d ca-s -d ca-s -d a	al. 4) Order of reaction changes with atmospheric = -d[A] = k [A]() dt reactant A with (a-x) weget ca <sup>n</sup> c) = k. [a-x] ()		ж. П.	tal condition. Define consequative and parallel reaction with suitable example? Consequative reaction : Bt is defined as reaction is proceed
	It is always an integer. 4) Molecularity of rea <sup>n</sup> does not change with environ- Rate of reaction Substitute conc. of r rate of re -d ca- dt -da + dt -da + dt -da - dt	al. 4) Order of reaction changes with atmospheric. = -d[A] = k[A]() reactant A with (a-x) weget ca <sup>n</sup> c) = k.[a-x] dx = k[a-x] t = -k[a-x]		ж. П.	tal condition . Condition in gas phase real Define consequative and parallel reaction with switchie example? Consequative reaction : Bt is defined as reaction is proceed from reactant to product to one or more intermediate state. e.g: A _ K: > B K:> c
	It is always an integer. 4) Molecularity of rea <sup>n</sup> does not change with environ- Rate of reaction Substitute conc. of r rate of re -d ca- dt -da + dt -da + dt -da - dt	al. 4) Order of reaction changes with atmospheric. = -d[A] = k[A]() reactant A with (a-x) weget ca <sup>n</sup> c) = k.[a-x] dx = k[a-x] t = -k[a-x]		ж. П.	tel condition . Condition in gas phase real Define consequative and parallel reaction with suitable example? Consequative reaction is proceed Prom reaction : "Bt is defined a reaction is proceed Prom reaction to product to one or more intermediate state." e.g.: A to B teste Parallel reaction :-
	It is always an integer. A) Molecularity of rea <sup>n</sup> does not change with environ- Rate of reaction Substitute conc. of r rate of re -d ca- , dt -da + dt -da + dt -da + dt -da + dt	al. 4) Order of reaction changes with atmospheric. = -d[A] = k[A]0 at = k[A]0 reactant A with (a-*) weget an c] = k[a-*] t = k[a-*] t = k[a-*] t = k[a-*]		ж. П.	tel condition. Define consequative and parallel reaction with suitable example? Consequative reaction is proceed from reactant to product to one or more intermediale state. e.g: A - ++ & B ++ > c Parallel reaction - "The reaction in which a substance or
	It is always an integer. 4) Molecularity of rea <sup>n</sup> does not change with environ- Rate of reaction Substitute conc. of r rate of re -d ca-s , dt -da + dt o + ds al By rearrange a	al. 4) Order of reaction changes with atmospheric. = -d[A] = k[A]0 reactant A with (a-x) weget an c] = k [a-x] dx = k [a-x] t = k [a-x]		ж. П.	tel condition. Define consequative and parallel reaction with suitable example? Consequative reaction is proceed from reaction - "Bt is defined as reaction is proceed from reactant to product to one or more intermediate state e.g: A - ++ & & ++ >            Parallel reaction - "The reaction in which a substance or reaction decompose more than one or more
	It is always an integer. Al Molecularity of rea <sup>n</sup> does not change with environ- Substitute conc. of rate of re -d ca-s -d ca-s -d a -d a	al. 4) Order of reaction changes with atmospheric. = -d[A] = k[A]() dt reactant A with (a-x) weget an c] = K.[a-x] dt = -k[a-x] t t bare eq <sup>n</sup> . x = k dt off		ж. П.	tal condition. Define consequative and parallel reaction with suitable example? Consequative reaction is proceed Prom reaction : Bt is defined as reaction is proceed from reactant to product to one or more intermediate state. e.g.: A - K & B - K & C Parallel reaction :- "The reaction in which a substance or reactiont decompose more than one or more intermediate way is called as parallel or side
	It is always an integer. Al Molecularity of rea <sup>n</sup> does not change with environ- Substitute conc. of reaction Tate of re -d ca-s dt -da + dt -da By rearrange a ca-	al. 4) Order of reaction changes with atmospheric. $= -\frac{d[A]}{dt} = k[A] \cdots 0$ $= -\frac{d[A]}{dt} = k[A] \cdots 0$ $\frac{dx}{dt} = k[A-x] weget an c] = K \cdot [a-x]$ $\frac{dx}{dt} = k[a-x]$ $\frac{dx}{dt} = k[a-x]$ $\frac{dx}{dt} = k[a-x]$ $\frac{dx}{dt} = k[a-x]$		ж. П.	tal condition. Define consequative and parallel or side reaction in gue phase reaction with suitable example? Consequative reaction is proceed Prom reactant to product to one or more intermediate state. " The reaction in which a substance or reaction to decompose more than one or more intermediate way is called as parallel or side reaction".
	It is always an integer. Al Molecularity of rea <sup>n</sup> does not change with environ- Substitute conc. of reaction Tate of re -d ca-s dt -da + dt -da By rearrange a ca-	al. 4) Order of reaction changes with atmospheric. = -d[A] = k[A]() dt reactant A with (a-x) weget an c] = K.[a-x] dt = -k[a-x] t t bare eq <sup>n</sup> . x = k dt off		ж. П.	Is conc. of product at time $t'$ . a. $z'$ is be conc. of reactant at time $t'$ . us, tal condition. Condition in gas phase real Define consequative and parallel reaction with suitable example? Consequative reaction : Bt is defined as reaction is proceed from reactant to product to one or more intermedicule state to e.g.: $A \xrightarrow{K} B \xrightarrow{K} C$ Parallel reaction : "The reaction in which a substance or reactiont decompose more than one or more intermedicule way is called as parallel or side reaction". $A \rightarrow B \rightarrow C$
	It is always an integer. 4) Molecularity of rea <sup>n</sup> does not change with environ- Substitute conc. of re rate of reaction at change with environ- Substitute conc. of re rate of reaction at change dat at by rearrange dat (a. by rearrange dat)	al. 4) Order of reaction changes with atmospheric $= -d[A] = k [A] \dots (0)$ $= -d[A] = k [A] \dots (0)$ reactant A with (a-x) weget ta <sup>n</sup> c] = k [a-x] dt x = k [a-x] t x = k [a-x] t bare eq <sup>n</sup> . x = k (a-x] t k. dt = dx (a-x)		ж. П.	Is conc. of product at time t. a. *' is be conc: of reactant at time t'. us, tal condition. €ondition in gas phase rea Define consequative and parallel reaction with suitable example? Consequative reaction :- "Bt is defined as reaction is proceed from reactant to product to one or more intermediate state." e.g.: A - K & B - K & C Parallel reaction :- "The reaction in which a substance or reactiont decompose more than one or more intermediate way is called as parallel or side reaction".
	It is always an integer. 4) Molecularity of rea <sup>n</sup> does not change with environ- Rate of reaction Substitute conc. of r rate of re -d ca-s dt -da t dt -da t dt -da t -da t 	al. 4) Order of reaction changes with atmospheric. $= -d[A] = k[A] \cdots 0$ $= -d[A] = k[A] \cdots 0$ $reactant A with (a-x) weget an c] = k [a-x] dx = k[a-x] dx = k[a-x] t x = k[a-x] t thore eqn. x = k.dt oR -x) k.dt = dx (a-x) licable for time t' and$		ж. П.	is conc. of product at time $t'$ . a. $*$ is be conc. of reactant at time $t'$ . us, tal condition. Condition in gas phase real Define consequative and parallel reaction with suitable example? Consequative reaction : Bt is defined as reaction is proceed from reactant to product to one or more intermediate state: $e:g : A \xrightarrow{K_{1}} B \xrightarrow{K_{2}} c$ Parallel reaction : "The reaction in which a substance or reactiont decompose more than one or more intermediate way is called as parallel or side reaction". $A \xrightarrow{K_{1}} B \xrightarrow{K_{2}} c$
	It is always an integer. 4) Molecularity of rea <sup>n</sup> does not change with environ- Rate of reaction Substitute conc. of r rate of re -d ca-s dt -da t dt -da t dt -da t -da t -d	al. 4) Order of reaction changes with atmospheric. $= -d[A] = k[A] \cdots 0$ $reactant A with (a-x) weget an c] = k [a-x] dx = k [a-x] dx = k [a-x] t x = k [a-x] k. dx = dx (a-x) lite bare eqn. x = k. dt or -x) k. dt = dx (a-x) lite bare eqn. x = k dt or -x) k. dt = dx (a-x) lite bare eqn. x = k dt or -x)$		Re la	Is conc. of product at time $1'$ . a. $*$ is be cont: of reactant at time $1'$ . us, tal condition. Condition in gas phase rea Define consequative and parallel reaction with suitable example? Consequative reaction : Bt is defined as reaction is proceed from reactant to product to one or more intermedicule state e.g: $A \xrightarrow{K_1} B \xrightarrow{K_2} c$ Parallel reaction : "The reaction in which a substance or reactiont decompose more than one or more intermedicule usy is called as parallel or side reaction". $A \xrightarrow{K_1} B \xrightarrow{K_2} c$
	It is always an integer. Al Molecularity of rea <sup>n</sup> does not change with environ- Substitute conc. of reaction Substitute conc. of reaction rate of re -d ca-s , dt -da t dt -da t -da t	al. 4) Order of reaction changes with atmospheric. = -d[A] = k[A]0 at0 reactant A with (a-x).wegel at0 (dx = k[a-x] dt0 0		Re la	Is conc. of product at time t. a. & is be conc. of reactant at time t. tal condition. Condition in gas phase rea Define consequative and parallel reaction with suitable example? Consequative reaction : Bit is defined as reaction is proceed from reactant to product to one or more intermediate state." e.g.: A - K & B - K & C Parallel reaction :- "The reaction in which a substance or reactiont decompose more than one or more intermediate way is called as parallel or side reaction". A - B - C e.g.: A - K & B A - K & C What is difference between unstable intermediate
	It is always an integer. Al Molecularity of rea <sup>n</sup> does not change with environ- Substitute conc. of reaction Substitute conc. of reaction rate of re -d ca-s , dt -da t dt -da t -da t	al. 4) Order of reaction changes with atmospheric. = -d[A] = k[A]0 at0 reactant A with (a-x).wegel at0 (dx = k[a-x] dt0 0	Ans	Re la	Is conc. of product at time $t'$ . a. $z'$ is be conc. of reactant at time $t'$ . us, tal condition. Condition in gas phase rea Define consequative and parallel reaction with suitable example? Consequative reaction : Bit is defined as reaction is proceed from reactant to product to one or more intermediate state. $z = z + A \xrightarrow{K_{1,2}} g \xrightarrow{K_{2,2}} c$ Parallel reaction : "The reaction in which a substance or reactiont decompose more than one or more intermediate way is called as parallel or side reaction". $A \rightarrow B \rightarrow c$ eg: $K_{1,2} = C$ What is difference between unstable intermediate and an activated complex.
	It is always an integer. Al Molecularity of rea <sup>n</sup> does not change with environ- Substitute conc. of reaction Substitute conc. of reaction rate of re -d ca-s , dt -da t dt -da t -da t	al. 4) Order of reaction changes with atmospheric. $= -d[A] = k[A] \cdots 0$ $= -d[A] = k[A] \cdots 0$ $reactant A with (a-x) weget an c] = k [a-x] dx = k[a-x] dx = k[a-x] t x = k[a-x] t thore eqn. x = k.dt oR -x) k.dt = dx (a-x) litable for time 1' and changing and time limit as. x = k dx (a-x) ax$	Ans	6 5 5 7	Is conc. of product at time $t'$ . a. $*$ is be conc. of reactant at time $t'$ . us, tal condition. Condition in gas phase rea- Define consequative and parallel reaction with suitable example? Consequative reaction :- "Bt is defined as reaction is proceed from reactant to product to one or more intermediate state." e.g.: $A \xrightarrow{K_1} B \xrightarrow{K_2} C$ Parallel reaction in which a substance or reaction decompose more than one or more intermediate way is called as parallel or side reaction". $A \xrightarrow{K_1} B$ What is difference between unstable intermediate and an activated complex. An unstable intermediate is an actual chem
	It is always an integer. Al Molecularity of rea <sup>n</sup> does not change with environ- Substitute conc. of reaction Substitute conc. of reaction rate of re -d ca-s , dt -da t dt -da t -da t	al. 4) Order of reaction changes with atmospheric. = -d[A] = k[A]0 at0 reactant A with (a-x).wegel at0 (dx = k[a-x] dt0 0	Ans	6 5 5 7	Is conc. of product at time $1'$ . a. $*$ is be conc. of reactant at time $1'$ . us, tal condition. Condition in gas phase rea Define consequative and parallel reaction with suitable example? Consequative reaction : Bit is defined as reaction is proceed from reactant to product to one or more intermediate state. $*$ $23 \times 3 \times$
	It is always an integer. Al Molecularity of rea <sup>n</sup> does not change with environ- Substitute conc. of reaction Substitute conc. of reaction rate of re -d ca-s , dt -da t dt -da t -da t	al. 4) Order of reaction changes with atmospheric. $= -d[A] = k[A] \cdots 0$ $= -d[A] = k[A] \cdots 0$ $reactant A with (a-x) weget an c] = k [a-x] dx = k[a-x] dx = k[a-x] t x = k[a-x] t thore eqn. x = k.dt oR -x) k.dt = dx (a-x) litable for time 1' and changing and time limit as. x = k dx (a-x) ax$	Ans	6 5 5 7	Is conc. of product at time $t'$ . a. $*$ is be conc. of reactant at time $t'$ . us, tal condition. Condition in gas phase real Define consequative and parallel reaction with suitable example? Consequative reaction - Bt is defined as reaction is proceed from reactant to product to one or more intermediate state. $e:g := A \xrightarrow{K_{12}} B \xrightarrow{K_{22}} c$ Parallel reaction in which a substance or reactant decompose more than one or more intermediate way is called as parallel or side reaction. $A \xrightarrow{K_{12}} B \xrightarrow{K_{12}} c$ What is difference between unstable intermediat and an activated complex. An unstable intermediate is an actual chemical ical species. It has normal, band order. It may be stabilized under the different reaction
	It is always an integer. 4) Molecularity of rea <sup>n</sup> does not change with environ- Substitute conc. of reaction is substitute conc. of reaction is rate of reaction is at of care - d care - d care - d at is - da t - da t This eq <sup>n</sup> is only apple conc. Ca-x)' For wide Integrate above eq <sup>n</sup> - K [ dt] = - K [ dt] =	al. 4) Order of reaction changes with atmospheric. $= -d[A] = k[A] \cdots 0$ $= -d[A] = k[A] \cdots 0$ $reactant A with (a-x) weget an c] = k [a-x] dx = k[a-x] dx = k[a-x] t x = k[a-x] t thore eqn. x = k.dt oR -x) k.dt = dx (a-x) litable for time 1' and changing and time limit as. x = k dx (a-x) ax$	Ans	6 5 5 7	Is conc. of product at time $t'$ . a. $z'$ is be conc. of reactant at time $t'$ . us, tal condition. Condition in gas phase real Define consequative and parallel reaction with suitable example? Consequative reaction : Bt is defined as reaction is proceed from reactant to product to one or more intermediate state. $e:g : A \xrightarrow{K_{1,2}} B \xrightarrow{K_{2,2}} C$ Parallel reaction in which a substance or reactant decompose more than one or more intermediate way is called as parallel or side reaction". $A \longrightarrow B \rightarrow C$ $e:g: K_{1,2} B$ What is difference between unstable intermediat and an activated complex. An unstable intermediate is an actual chem- ical species. It has normal, band order. It may be stabilized under the different reaction condition activated complex is postualated open
	It is always an integer. 4) Molecularity of rea <sup>n</sup> does not change with environ- Substitute conc. of reaction is substitute conc. of reaction is rate of reaction is at of care - d care - d care - d at is - da t - da t This eq <sup>n</sup> is only apple conc. Ca-x)' For wide Integrate above eq <sup>n</sup> - K [ dt] = - K [ dt] =	al. 4) Order of reaction changes with atmospheric. $= -d[A] = k [A] \cdots 0$ $dt = k [A] \cdots 0$ $dt = k [A] \cdots 0$ $dt = k [A-2]$ $dx = k [A-2]$	Ans		is conc. of product at time $t'$ . a. $*$ is be conc. of reactant at time $t'$ . us, tal condition. Condition in gas phase real Define consequative and parallel reaction with suitable example? Consequative reaction: Bt is defined as reaction is proceed from reactant to product to one or more intermediale state. $e:g : A \xrightarrow{K_{1}} g \xrightarrow{K_{2}} c$ Parallel reaction in which a substance or reactant decompose more than one or more intermediate way is called as parallel or side reaction. $A \xrightarrow{K_{1}} g$ $e:g: K_{1} g$ $A \xrightarrow{K_{2}} c$ What is difference between unstable intermediat and an activated complex. An unstable intermediate is an actual chem- ical species. It has normal band order. It may be stabilized under the sdifferent reaction condition activated complex is postualated ope cies which has maximum energy during the
	It is always an integer. 4) Molecularity of rea <sup>n</sup> does not change with environ- Substitute conc. of reaction is substitute conc. of reaction is rate of reaction is rate of reaction is at it - da t de	al. 4) Order of reaction changes with atmospheric. $= -d[A] = k [A] \cdots 0$ $dt = k [A] \cdots 0$ $dt = k [A] \cdots 0$ $dt = k [A-2]$ $dx = k [A-2]$	Ans		is conc. of product at time $t'$ . a. $*$ is be conc. of reactant at time $t'$ . us, tal condition. Condition in gas phase real Define consequative and parallel reaction with suitable example? Consequative reaction : Bit is defined as reaction is proceed Prom reactant to product to one or more intermediate state." e.g.: $A \xrightarrow{K_{1,2}} B \xrightarrow{K_{2,2}} C$ Parallel reaction : "The reaction in which a substance or reactiont decompose more than one or more intermediate way is called as parallel or side reaction". $A \rightarrow B \rightarrow C$ eg: $K_{1,3} B$ . $A \xrightarrow{K_{2,3}} B$ What is difference between unstable intermediat and an activated complex. An unstable intermediate is an actual chemical species. It has normal band arder. It may be stabilized under the sdifferent reaction condition activated complex is postualated open cies which has maximum energy during the inversion from reacted to parallel.
	It is always an integer. 4) Molecularity of rea <sup>n</sup> does not change with environ- Substitute conc. of reaction is substitute conc. of reaction is rate of reaction is rate of reaction is at it - da t de	al. 4) Order of reaction changes with atmospheric. $= -d[A] = k[A] \cdots 0$ $dt$ $= -d[A] = k[A] \cdots 0$ $dt$ $reactant A with (a-x) wegether al. dx = k[a-x] dx = k[a-x] dt x = k[a-x] t dx = k[a-x] t x = k[a-x] t t t t t t t t t t$	Ans		Is conc. of product at time $t'$ . a. $z'$ is be conc. of reactant at time $t'$ . us, tal condition. Condition in gas phase real Define consequative and parallel reaction with suitable example? Consequative reaction : Bt is defined as reaction is proceed from reactant to product to one or more intermediate state. e.g.: $A \xrightarrow{K_1} B \xrightarrow{K_2} C$ Parallel reaction in which a substance or reaction decompose more than one or more intermediate way is called as parallel or side reaction. $A \xrightarrow{K_1} B \xrightarrow{K_2} C$ What is difference between unstable intermediate and an activated complex. An unstable intermediate is an actual chem- ical species. Bt has normal, band order. Bt may be stabilized under the sdifferent reaction condition activated complex is passualated spe- cies which has maximum energy during the inversion from reacted to parallel. Half-life of a 3 <sup>st</sup> order reaction is 2.5×10 <sup>3</sup>
	It is always an integer. It is always an integer. It Molecularity of rea <sup>n</sup> does not change with environ- Substitute conc. of - Tate of re -dca-x , dt -da + dt -da + dt -da By rearrange a Ca- Ca- Ca- Ca- Ca- Ca- Ca- Ca	al. 4) Order of reaction changes with atmospheric $= -d[A] = k[A] \cdots 0$ $= -d[A] = k[A] \cdots 0$ $reactant A with (a-x) wegether an c] = k [a-x] dx = k [a-x] dx = k [a-x] t t x = k [a-x]x = k [a-x]x = k [a-x]x = k (a-x]there eqn.x = k (a-x)there eqn.x = k (a-x)x = k (a-x)$	Ans		is conc. of product at time $1'$ . a. $*$ is be conc. of reactant at time $1'$ . us, tal condition. Condition in gas phase we Define consequative and parallel reaction with suitable comple? Consequative reaction - "Bt is defined as reaction is proceed Prom reactant to product to one or more intermediate state." $e:g:: A \xrightarrow{K_1} g \xrightarrow{K_2} c$ Parallel reaction in which a substance or reactiont decompose more than one or more intermediate way is called as parallel or side reaction". $A \xrightarrow{K_1} g \xrightarrow{K_2} c$ What is difference between unstable intermediate and an activated complex. An unstable intermediate is an actual chem- ical species. It has normal band order. It may be stabilized under the sufferent reaction condition from reacted to parallel.





Program (1)		Page Re   Outo
-8.1 1	100 March 1	Where k is the velocity constant.
$\frac{\partial e}{\partial q} = e^{-K_1 t} \qquad \dots \dots \dots (3)$	Senter	These eg" is known as integrated form of
	Salarla	These eqn is known as integrated form of first order reaction.
eqn (a) is called exponential eqn. i.e. conc of	22	
reactant A. fall exponential with time B.	b]	Derive the expression for the half life of annth
and the second s	100	order merchan ?
1) For rate of formation, dy = ky 2		order reaction ?
dt	Ans-)	Half-life period · (t 12]
at Franciska har in the second second		We know that
a) For rate decomposition, dy = - ka.y.	-	$K = \frac{1}{t(n-i)} \left[ \frac{1}{(a-2\epsilon)^{n-i}} - \frac{1}{a^{n-i}} \right]$
$\frac{dY}{dt} = k_1 x = -k_2 \cdot Y,$	.e.	By rearrange above equation we get. $t = \frac{1}{\kappa (n-1)} \begin{bmatrix} 1 \\ (a-2)^{n-1} \end{bmatrix}$
dy = kise - k2.y.	-	te <u>l</u> e <u></u> <u></u>
		$k(n-i) [(a-x)^{n-i} a^{n-i}]$
Multiply above eqn with -ve sign.		For sor rean, t = Lise and than above eqn == 0/2
-dy kize + ko.y.	9	becomes.
dł		itus = 1 [1 - 1]
-dy - Kay-k. a managed		: tila - 1 1 - 1 K(n-1) (a-ala)h-1 an-1
-dy = K2 Y - k, 2e	-	
aut and can there B can		iter the second
put eqn. (s) in eqn (4) -dy		$\frac{1}{12} = \frac{1}{K(n-1)} \left[ \frac{1}{(a_{12})n^{-1}} - \frac{1}{a^{n-1}} \right]$
- al Kal- Ki-ge		
		$\frac{1}{1} \frac{1}{k(n-i)} \left[ \frac{2^{n-i}}{a^{n-i}} - \frac{4}{a^{n-i}} \right]$
Eqn (5) is called linear differential eqn of 1st		Kin-ij Laini alin j
orden egn is		$\frac{1}{k(n-1)a^{n-1}}\left[2^{n-1}-1\right]$
order eqn is $Y = \frac{k_1 \alpha}{k_2 - k_1} \left( e^{-kt} - e^{-k_2 t} \right) \cdots \cdots \cdots \cdots (6)$		k(n-1)on-1
Ka-Ki		$\frac{1}{12} = \left[\frac{2^{n-1}}{k(n-1)}\right] \cdot \frac{1}{a^{n-1}}$
- SF their is no change is no. of moles. i.e sum		[k(n-1]] a <sup>n-1</sup>
of males A, B, and c = Initial males of reactant		2. 11/2 × 1 an-1
at him a the second and the second moles of reactant		dn-1
at time t A of time t= 0		
	-1	
2 + 4 + 2 = Q		How does the concentration of intermediate
$z = \alpha - \varkappa - \gamma  \dots  \dots  (\gamma)$		be obtained in the case of consecutive rea-
put eqn (s) in eqn we get.		ction A -> B -> c
1		
Prige No.	-	$\therefore z = q \cdot q e^{-\frac{k_i t}{k_i - \frac{k_i \cdot q}{k_i - k_i}} \left( e^{-\frac{k_i t}{k_i - \frac{k_i \cdot q}{k_i - k_i}} \right).$
Anus Consecutive reaction -		$-2 = a \cdot ae - \frac{k_1 \cdot q}{k_1 \cdot k_2} (e - e^{-k_1 \cdot q})$
The reaction which proceed from reactant		KI-KI (
to product into one or more intermediate state		
- Consider a rean. $A \xrightarrow{k_1} B \xrightarrow{k_2} C$	8.3	Solve the Pollowing
A - B - C		Republic de la presence and a maine
Snitial time a o o	q	In the anthensive eqn for a certain reaction +
(t=0)		values of A J Ea ane 4× 1013 sec. and 38.6 kg
time (t) 2e y 2		molt respect. OF the reaction is of the 1st on
come co a g a		at what temp will it's half lief be to minutes
T D D D D D D D D D D D D D D D D D D D	Ans	Given :-
The rate of decomposition de	11160_	$A = 4 \times 10^{13} \text{ sec}^{-1}$
of reactant A.		A-ANIO SEC
Multiply above eqn with -ve sign E		$Ea = 98.6 \text{ KJ mol}^{-1}$
-dæ = kiæ.		t112 = 10 minutes = 10 x 60 = 600 sec.
a tip an at share with a to a to a to a		K = 0.693 til2
By reamange the eqn.		
		K = 0.693
- de ekidt		600
-de - k; dt	10	
-de - k; dt ze abore eg <sup>n</sup> without limit,	1.0	k = 1-155 x 103
-de - k; dt ze abore eg <sup>n</sup> without limit,	12	$ \begin{array}{c} k = 1.155 \times 10^{3} \\ k = A \cdot e^{-Eq/RT} \end{array} $
-de - ki dt	4	k · A. e · Eq/RT Jog k · A · Eq
$\frac{-dx}{2e} = k; dt$ $\frac{d}{dt} = \frac{d}{dt} =$	4	K · A · e · Eq/RT
$\frac{-dz}{ze} = k_{r} dt$ $\frac{\partial h}{\partial t} = k_{r} \int dt + c$ $\frac{\partial h}{\partial t} = k_{r} \int dt + c$ $\frac{\partial h}{\partial t} = k_{r} \cdot t + c$ $\frac{\partial h}{\partial t} = k_{r} \cdot t + c$	(4) (4) (4)	K · A.e · Eq. Log K · A · Eq. RT.
$\frac{-dx}{2e} = k_{1} dt$ $\frac{\partial h}{\partial x} = k_{1} \int dt + c$ $\frac{\partial h}{\partial x} = k_{1} \int dt + c$ $\frac{\partial h}{\partial x} = k_{1} \int dt + c$ $\frac{\partial h}{\partial x} = k_{1} \int dt + c$ $\frac{\partial h}{\partial x} = k_{1} \int dt + c$ $\frac{\partial h}{\partial x} = k_{1} \int dt + c$ $\frac{\partial h}{\partial x} = k_{1} \int dt + c$ $\frac{\partial h}{\partial x} = k_{1} \int dt + c$	14 141 141	k · A. e · Eq/RT Jog k · A · Eq
$\frac{-dx}{x} = k_{1} dt$ $\frac{\partial h}{\partial x} = k_{1} \int dt + c$ $\frac{-dx}{x} = k_{1} \int dt + c$	14 141 141	$k \cdot A \cdot e^{-Eq/RT}$ $\log k \cdot A \cdot Eq.$ RT. $\log (1 \cdot 155 \cdot x \log^3) = 4 \cdot x \log^3 - \frac{98 \cdot 6}{8 \cdot 314 \times T}$
$\frac{-dx}{2e} = k_{1} dt$ $\frac{-dx}{2e} = k_{2} \int dt + c$ $\frac{-f_{2} dx}{2e} = k_{2} \int dt + c$ $\frac{-t_{1} x}{2e} = k_{1} \int dt + c$ $\frac{-t_{1} x}{2e} = k_{2} \int dt + c$	4 44 44 44 44 44 44 44 44 44 44 44 44 4	$k \cdot A \cdot e^{-Eq/RT}$ $\log k \cdot A \cdot Eq.$ RT. $\log (1-155 \times 10^3) = 4 \times 10^3 - 98 \cdot 6$
$\frac{-dx}{2e} = k_{1} dt$ $\frac{-dx}{2e} = k_{2} dt + c$ $\frac{-f_{1} dx}{2e} = k_{2} dt + c$ $\frac{-4n}{2e} = k_{1} dt + c$ $\frac{-4n}{2e} = k_{1} dt + c$ $\frac{-4n}{2e} = k_{2} dt + c$	14 14 14 10	$k \cdot A \cdot e^{-\frac{1}{6}a/RT}$ $\log k \cdot A \cdot \frac{E_{0}}{RT}$ $\log (1 \cdot 155 \times 10^{3}) = 4 \times 10^{3} - \frac{98 \cdot 6}{8 \cdot 314 \times T}$ $- 2 \cdot 9374 = 4 \times 10^{3} - \frac{98 \cdot 6}{8 \cdot 314 \times T}$
$\frac{-dz}{z} = k_{1} dt$ $\frac{-dz}{z} = k_{1} dt + c$ $\frac{-dz}{z} = k_{1} f dt$	12 (2) (2) (2) (2) (2) (2) (2) (2) (2) (2	$k \cdot A \cdot e^{-Eq/RT}$ $\log k \cdot A \cdot Eq.$ $\log (1 \cdot 155 \times 10^{3}) = 4 \times 10^{3} - 98 \cdot 6$ $e \cdot 314 \times T$ $- 2 \cdot 9374 = 4 \times 10^{3} - 98 \cdot 6$ $e \cdot 314 \times T$ $T = 4 \times 10^{3} - 98 \cdot 6$
$\frac{-dx}{x} = k_{1} dt$ $\frac{-dx}{x} = k_{1} dt$ $\frac{-dx}{x} = k_{2} f dt + c$ $\frac{-dx}{x} = k_{1} f dt + c$	te (a) (a) (a) (a) (a) (a) (a) (a) (a) (a)	$k \cdot A \cdot e^{-\frac{Eq}{RT}}$ $\log k \cdot A \cdot \frac{Eq}{RT}$ $\log (1 \cdot 155 \times 10^3) = 4 \times 10^3 - \frac{98 \cdot 6}{8 \cdot 314 \times T}$ $- 2 \cdot 9374 = 4 \times 10^3 - \frac{99 \cdot 6}{8 \cdot 314 \times T}$ $T = 4 \times 10^3 - \frac{99 \cdot 6}{8 \cdot 314 \times T}$ $T = 4 \times 10^3 - \frac{98 \cdot 6}{8 \cdot 314 \times (C2 \cdot 9374)}$
$\frac{-dz}{z} = k_{1} dt$ $\frac{-dz}{z} = k_{1} dt + c$ $\frac{-dz}{z} = k_{1} f dt$	te (a) (a) (a) (a) (a) (a) (a) (a) (a) (a)	$k \cdot A \cdot e^{-Eq/RT}$ $\log k \cdot A - Eq.$ $RT$ $\log (1 - 155 \times 10^{3}) = 4 \times 10^{3} - 92 \cdot 6$ $8 \cdot 314 \times T$ $- 2 \cdot 9374 = 4 \times 10^{3} - 92 \cdot 6$ $8 \cdot 314 \times T$ $*T = 4 \times 10^{3} - 92 \cdot 6$ $8 \cdot 314 \times (-2 \cdot 9374)$ $T = 4 \times 10^{3} - 92 \cdot 6$
$\frac{-dx}{x} = k_{1} dt$ $\frac{-dx}{x} = k_{1} dt$ $\frac{-dx}{x} = k_{2} f dt + c$ $\frac{-dx}{x} = k_{1} f dt + c$	یر روز روز روز روز روز روز روز روز روز رو	$k \cdot A \cdot e^{-\frac{Eq}{RT}}$ $\log k \cdot A - \frac{Eq}{RT}$ $\log (1 - 155 \times 10^{3}) = 4 \times 10^{3} - \frac{98 \cdot 6}{8 \cdot 314 \times T}$ $- 2 \cdot 9374 = 4 \times 10^{3} - \frac{98 \cdot 6}{8 \cdot 314 \times T}$ $*T = 4 \times 10^{3} - \frac{98 \cdot 6}{8 \cdot 314 \times C \cdot 2 \cdot 9374}$ $T = 4 \times 10^{3} - \frac{98 \cdot 6}{8 \cdot 314 \times C \cdot 2 \cdot 9374}$ $T = 4 \times 10^{3} - \frac{98 \cdot 6}{-24 \cdot 4216}$
$\frac{-dx}{x} = k_{1} dt$ $\frac{-dx}{x} = k_{1} dt$ $\frac{-dx}{x} = k_{2} \int dt + c$ $\frac{-dx}{x} = k_{1} \int dt + c$	یر رون درین درینی درینی	$k \cdot A \cdot e^{-\frac{Eq}{RT}}$ $\log k \cdot A - \frac{Eq}{RT}$ $\log (1 - 155 \times 10^{3}) = 4 \times 10^{3} - \frac{99 \cdot 6}{8 \cdot 314 \times T}$ $- 2 \cdot 9374 = 4 \times 10^{3} - \frac{99 \cdot 6}{8 \cdot 314 \times T}$ $*T = 4 \times 10^{3} - \frac{98 \cdot 6}{8 \cdot 314 \times C \cdot 2 \cdot 9374}$ $T = 4 \times 10^{3} - 98 \cdot 6$
$\frac{-dx}{x} = k_{1} dt$ $\frac{-dx}{x} = k_{1} dt + c$ $\frac{-dx}{x} = k_{1} \int dt + c$ $\frac{-dx}{x} \int dt + c$ $\frac{-dx}{x} \int dt + c$		$k \cdot A \cdot e^{-Eq/RT}$ $\log k \cdot A - Eq.$ $RT$ $\log (1 - 155 \times 10^{3}) = 4 \times 10^{3} - \frac{98 \cdot 6}{8 \cdot 314 \times T}$ $- 2 \cdot 9374 = 4 \times 10^{3} - \frac{93 \cdot 6}{8 \cdot 314 \times T}$ $*T = 4 \times 10^{3} - \frac{98 \cdot 6}{8 \cdot 314 \times (2 \cdot 9374)}$ $T = 4 \times 10^{3} - \frac{98 \cdot 6}{8 \cdot 314 \times (2 \cdot 9374)}$ $T = 4 \times 10^{3} - \frac{99 \cdot 6}{-24 \cdot 4216}$



9.0 ant concentration by two third in a millisecond. In how much time will it be included to one nineth? Given :-Ana  $a = 2.5 \times 10^{5} \text{ mol}^{-1}$   $k = 2.25 \times 10^{-1} \text{ m}$  t = 4 minute1 mal -1 5-1 Ana+ Given :t = milli second = 1000 sec = 4 × 60 + 240 " sec t112 = ? 2 = ? a = 1 Q-26 = 213 Formula -Formula . K1 = 2. 203 109 9-20 = 2.803 109 1 1000 109 13 +12 = 1 662.5 = 2.303 × 10<sup>3</sup> log 3/2 = 0.303 × 10<sup>3</sup> log 1/2 = 0.303 × 10<sup>3</sup> log 1.5 = 0.303 × 10<sup>3</sup> × 0.1760 k1 = 4.0532 × 10<sup>4</sup> t112 = 1.777 × 103 sec. a)  $k = \frac{1}{q \cdot t} \cdot \frac{q}{(q - \pi)}$ (a-2)=119 = t = ? x = (a-x) x a 1 x = 2.5 x 10<sup>5</sup> KI = 2.303 log a Partin t = 0.303 109 91' t = 2.303 log 9 4.0582×10-4 = 5681.93 × 0-9542 t = 5421 sec. (c) Chlorofluro creide (CE) decays according to the second order rate law If the initial con? is 2.5 x 10<sup>5</sup> mo!" Calculate the half life and conc" [Rate conctant k = 2.25 x 10" mol" 5"] Assignment no. e Here both reaction follows simple first Attempt the Pollowing. 0.1 order differential form in. [A] = a. c ŋ For the parallel reaction , A kin B, A kin c A-D. Determine the concentration of B, c. and D Ans > Parallel reaction :-The reaction in which a substance or reactant dt decompose than one way is called as parallel or side reaction." - buch reaction gives more than one independent product.  $A - \begin{bmatrix} k_1 & B \\ k_2 & c \end{bmatrix}$ put eq<sup>n</sup> (6) in eq<sup>n</sup> (7) and (2) d[B] =  $k_1 \cdot q \cdot e^{-Ck_1 + K_2} t \cdots (q)$ d[c] = k2. a.e - (ki+k2)t ....-. (10) K2 - 38 one of the reaction utilize major portion of the reactant it is called main reaction and other by rearrange and integrate (9) and (10) is called side reaction .  $\begin{bmatrix} a \end{bmatrix} = \frac{k_{1} \cdot a}{k_{1} \cdot k_{2}} \left( 1 - e^{-(k_{1} + k_{2}) E} \right) \cdots \cdots \in \mathbb{N}$ Similarly,  $f_{c} = \frac{k_{2} \cdot q}{k_{1} \cdot k_{2}} \left( 1 - e^{-(k_{1} + k_{2}) \frac{1}{k}} \right) \dots \dots (15)$ from above eqn The rate eqn for 1<sup>bt</sup> reaction becomes, hence, d[A] = -K. [A] or by taking reaction of eqn (u) and (12) We get. For second reaction d[A] = - k2 [A] or 2) Consider the reaction mechanism. AtB Kin c .... O -d[A] = k2 [A] - (4) - - K2 0 ..... () From eq" @ J @ the net rea" becomes. -d[A] = k: [A] + k2 [A] - @ Write the expression of dipl the rate of product formation, assuming equation is estublished



shed in the 10t order reaction before any appro-ciable amount of product is formed or freption pre-equilibria approximation show that -d[P] = KP [n] [B] for the following reaction . drei = Kp·K [A][B] AtB dt I, ItB KP, P where I is an intermedi-ate? put eq" in @ and @ The rate formation of equilibrium and rate of decomposition eq<sup>m</sup> is faster than rate of formation Anst A [P] = K. [N] [B] ...... of product . Whene, Kb.K=K hore, pre-equilibria arises. in eqn (3) eqn is not involve hence, pre-equili-bria is follows and order kinetics. 3) Obtain the expression for rate constant for and order reaction. When reactants in concentra From above rea<sup>n</sup> rate for forword reaction <u>A[A]</u> = - ka[A][B] tions. Ana -> Consider a reaction , A + B  $\longrightarrow$  product rate of reaction =  $\frac{d[A]}{dt}$  = k·[B]·[B]-@ Rate for backword seaction <u>d(A)</u> = K'a [AB] eq<sup>m</sup> - BP (a-x) and (b-x) are the concentration of reactant time t then above eq" becomes. The net reaction are d[n] = ka' [AB] eq<sup>m</sup>-ka [A][B] rate of reaction = rd (a-2) de = k (a-2). (b-2) ...... hence, abore eq<sup>n</sup>, becomes, ka [A8] eq<sup>m</sup> = ka [A][8] = 0 k'a [A8] eq<sup>m</sup> = ka [A][8] k'a [A8] eq<sup>m</sup> = ka [A][8] k'a [A8] eq<sup>m</sup> by rearranging eqn .... K = <u>[AB]</u> eq<sup>m</sup> ..... (D) [A][B] by rearranging eqn [AB] eqm = K = [A] [B], where Ka = K. Calculate energy of activation for a reaction (P If rate of the reaction is doubled by changin. g the temperature from 29°c to 37°c  $k \cdot dt = \frac{dx}{(a-b)} \begin{bmatrix} 1 & -1 \\ (b-x) & (a-x) \end{bmatrix}$ Given Ans- $k \cdot dt = \frac{1}{(a \cdot b)} \begin{bmatrix} dx & -dx \\ (b \cdot x) & (a \cdot x) \end{bmatrix}$ Ti = 24 °C = 24 + 273 = Book To = 37°C = 37 + 273 = 310 k for wide change in concentration integrate above eq if rate of reaction is doubted with limit, we get,  $k_2 = 2k_1$ Ea = ? | R = 8.314 J  $k\int dl = \frac{1}{(a-b)} \left[ \int \frac{dx}{(b-x)} - \int \frac{dx}{(a-x)} \right]$ Formula :log k2 = Eq [T2-Ti k1, 2:303R [T1-Ta  $k dt = \frac{1}{(a-b)} \left[ \left[ -\ln(b-z) \right]_{0}^{2} - \left[ -\ln(a-z) \right]_{0}^{2} \right]$ log 2ki - Eg 310-800 ki 2-303 800×310  $kt = \frac{1}{(a-b)} \left[ -\ln (b-z) + \ln b + \ln (a-z) + \ln a \right]$ log 2 = Eq [ 10 2.303 [ 93000]  $k = \frac{1}{(a-b)} \left[ 4nb + 4n(a-z) + 4nb + 4n(a-z) - 4na \right]$ 0-3010 = Eq [10 2-303 [93000]  $k = \frac{1}{(q-b)} \left[ \frac{1}{1} \ln b + \ln (a-x) - \ln a - \ln (b-x) \right]$ 0.3010 - Eq. × 1.0752× 104  $k \cdot t = \frac{1}{(a+b)} \left[ \ln \frac{b}{a} \frac{(a-a)}{(b-a)} \right]$ Ea = 0.3010 × 2.303. 1.0752 × 10-4 Eq = 0.693205 1.0752 × 10-9  $k = \frac{1}{t(a-b)} \quad dn \quad \frac{b(a-x)}{a(b-x)}$ Ea = 6447.20 k: <u>2.303</u> log <u>b(a-2)</u> t(a-b) a(b-2) ····· ③ b) show that in every 1st order rean time eqn (s) is a expression for velocity constant required for 75% completion of reaction is with unequal initial concentration . double the half life period . g 2 Solve the following Given : -Ans -Q = 100



S) In a reaction the decrease in reactant concentra tion is zox in zo min and to 1 in 40 min. Caluda 2 = 75x , 11/2 = \*= 03/k = 0-2 = 100 - 75 = 25x te of reaction and rate constant?  $\frac{1}{1} = \frac{1}{207}$ Formula :-Ana bun = 2.303 log a . Te = 40% tile 2.303 log a arais Li = 20 min = 20 × 60 + 1200 ts . 40 min = 40 × 60 = 2400 lis = 2.203 tog Q = 100 1) q=x = 100 - 20% = 80%. 2) q-x = 100-40% = 60% atres - 2 gas ing ing = 3.303 log 4 0 Ki + 2.303 log a - - 2.343 - 8.6020 K1 + 2.303 109 100 - 1457 - 1-746 (D ki = 2.301 log (1.25) Take ratio of eq" @ ind @ K1 = 1919 x 10<sup>-3</sup> - 0-0369 K1 = 1-859 x 10<sup>-4</sup> 0<sup>-1</sup> 195 % = 11456 / K 2) k2 = 2.303 log a-2 F 2.00 Ka = 0.303 100 100 k2 = 9.585 × 104. log (1.60) K2 = 9.595 × 104. 0. 220 K2 = 2 1109 × 10 4 6 Assignment No-1 vi) method modification & resultabilition:-It significant modification to amend (31) What are the essial principal of method transfer ? Dissus in dealad documental. are interported at the time of trinif commocation Assentance meters. Implime ex revalidation may be necessary to ensure that the modification have not invelidation prevants. Consulsion in the method Validation ation & method Varitation & modification? There are five essential proceptes which all esure successful method pansfer repeat that all charge in method required required restallishing the examples of method decumentation communication , acceptance Contend implementation & method modification Validation give above respesent method & aevalidation respession regulared resultidation of the i) Documentation: method transferred from development laborations to designated tablet method. The Nersian of method is being employeed for product ancursus method Natiduti & method harfor It includes @ a written procedure - step by description of manipulation specific regent, equipment 4) Automation :- The use of reported step of procedure, instruction give one fossible interpretation It distructions method housefor from method radation appropriates cultured repeats indesfic any all main pulations of previous manual method only precission experiment need to be reparted occurs in the laboratorismy after The proceed are is connect provided frecised method transfor. B method validation Report It contain experi-mental design & data that justify the concilius » sample preparention -- It would be desire to use whole table instead of graind - table composition. The modification solvent solvent or solvent solid ratiosance the analytical method switten, perform is intode O system suitabicity onteriol. It defins the changed in the exaction step. minimum acceptance. Criterial Perior to O Dilution. It solvent mulisremain iden is communication. The ARD & QC Staff's Should meet before transfer to discuss relevant practical aspect of the method tical to those in the original method & the analytical concentration are to be affred & these experiment reput a perficulary manipulative steps These discussion should be initiated before skilds



Prope Hea	(and a second se
	Data
complete It is possible to introduce any	d) Allow I'm and C at the second
desirable change modification into ARD Nal	d) Alternative use of chomatographic
allion report price registivition Inter	technique - The change in specificity
departmental communication allons time	& resolution as well as quantificative
to genrate data to justify allemative	aspect of the method. This type of
to genture data to Justing carringery	modificultion require all method validuling
to prepare method Validation report include	Parameters to be reassed the specificity
included in registration Rickage e.g	linewrite according provision & time office
chages in sample prepration automent	and the second state of the
requirment, dviability, cost - effectmence	2) White a short note on ILQ processes
	> The method transfer - It involves more
	designated to bestern at the months when
iv] Acceptonce contend. The designated	designated labortony obtain result experi-
labortony is responsible for issuming &	after anyting a sample of respresent.
	product. Plone will not assur concient
following sops define the contricul for	Performance of the method over time
accepting an analytical method. The date	& actually mask prophenus results
generated by sofs basic of method	amising from compensing eners
fransfer report. The designated laborting	
responsible for data conssion resulting	ii) Laborentery : - Each laborentery in the
From the use of the method most of	method transfer process should define.
sops proble & acceptable for unique	independently, an experimental protocal
childred for define amethod acceptable	
e-q different statistical approches	to be followed for eveny method
Car data pullique d'économico	transferred to most efficiently way :-
For data evaluation, different schem	to take advantages of the scientifi
- For evaluting operator to operator or days	dates base already established of
day Nanabicity	gruched in the method Validation
	seport
"J Implementation - The dessancetion	
laboration must follow the procedures	iii) function : - a) The designated (aboton)
written to ensur that method submitted	strailed conform the linerally & recovery
by date base to be included in the	for the draugte wore & in presencest
method valudation report to add addition	of the known moduct compones
deute at the time of method hansfor	by Desighing the experimental protrol forth
the method manster	and the state of t
Ils. so that it resempte as much as	labortony connected by addition a
Possible, that is camed out by the	insmiti into the method orby the
O Advantages	D Result Contrusion. The experiment
as Allow compassion of the result saw	summunised in the method trans
dates & coloniated results with those	report overcul objective of the re
arready in the method Valiation report	should be decumentation that +
by the monfey repeat to be reviewed by	
	method is acceptable, it is the
desidenting agency as a complementary package	subility of the designed echolon
@ method devalgment & designied lab-	The Method transfer Report-
Should test a common sample population	In the files of the designited lak
that should be represent of the intented	along with the method validatio
product, compassion of data provides dh	to support subsequent audits
	and an and and
deditative level of inter- idencitant	
additative level of inter-laberation	15 Dissuces Fieldman and dollars
information as well by forming busis of	
inter- laborton qualification (213) mole	Novitation & linter laberthen t
inter- labortony qualification (210) profit	Vor itation & linter labertry to
DExperimental design: allous bids to be	Vor itation & linter labertry to
DExperimental design: allous bids to be	Nor itation & Knter laberthay to Jon Totroduction. It is necessary to fundamental definations is nesse
Decemental design. allous bids take traced to an instrument in one laboriory	Nor itation & Kinter laberting to Throduction. It is necessary to fundamental definations is ness distinguish the responsibility of labortion that devolve a method
Dependention de well ay forming busis of inter-labortony qualification (213) prote - Despenmental design: allous bids take traced to an instrument in one labortony the method itself and specific elements	Nor itation & Kinter laberting to Throduction. It is necessary to fundamental definations is nessed distinguish the responsibility of labortions that devolop a method
Dependention as well as forming busis of inter-labortary qualification (213) profit Despendential design: allows bids to be traced to an instrument in one laborary the method itself and specific operator as beings that both lab will be dealy	Nor itation & Kinter laberthay to Throduction. It is necessary to fundamental definations is ness distinguish the responsibility of labortony that devolop a method those of laborationy abo will us
Despendention de well ay forming busis of inter-labortony qualification (213) profit Despendental design: allous bids take traced to an instrument in one labortony the method itself and specific offender reso beings that both lab will be dually ged both dualytical prepared & repren	Nor itation is kinter laberation of introduction. It is necessary to fundamental definations is nessed distinguish the responsibility of laboratory that devolop a method those of aboration aboration and method the "gap" between the
Dependention as well as forming busis of inter-labortary qualification (213) profit Despendential design: allows bids to be traced to an instrument in one laborary the method itself and specific operator as beings that both lab will be dealy	Nor itation is knter labertry to introduction it is necessary to fundamental definations is nessed distinguish the responsibility of labortory that devolop d method those of laborationy abo will ay method the "gap" between the labotortems is bridged by the m
Dermation as well by forming basis of inter-labortony qualification (213) profit - Deremmental design: allows bids to be traced to an instrument in one labortony -the method itself and specific affautor - son beings that both lab will be dealy ged both dealytical prepared & repren- tative product sample	<ul> <li>Dissuces fundamental definate Nor itation &amp; Knter laberatory it introduction it is necessary to fundamental definations is nessed distinguish the responsibility of laboratory that devolop a method those of laborationy also cull up method the "gap" between the labotanteris is bridged by the m transfer process</li> </ul>
Deterministion de well ay forming busis of inter- labortony gualification (213) profit - O. Experimental design: allous bids to be traced to an instrument in one labortony the method itself ord specific alexilog 3500 beings that both lab will be deally sed both dealytical prepared greption diative product sumple O Bids ( impression: associated with the	Nor itation & rinter laberatory of Janmoduction . It is necessary to fundamental definations is nessed distinguish the responsibility of laboratory that devolop a method those of laboratory abo will us method the gap. between the labolateris is bridged by the m transfer process
Deterministion de well ay forming busis of inter- labortony gualification (213) profit - O. Experimental design: allous bids to be traced to an instrument in one labortony the method itself ord specific alexilog 3500 beings that both lab will be deally sed both dealytical prepared greption diative product sumple O Bids ( impression: associated with the	Nor itation & Knter laboratory of Throduction It is necessary to fundamental definations is nessed distinguish the responsibility of laboratory that devolop a method those of laboratory abo will us method the gap." between the labotatens is bridged by the m transfer process i) pharamacetical industrial setmor
Dermation as well by forming basis of inter-labortony qualification (213) profit - Deremmental design: allows bids to be traced to an instrument in one labortony -the method itself and specific affautor - son beings that both lab will be dealy ged both dealytical prepared & repren- tative product sample	Nor itation & Knter laboratory of Throduction It is necessary to fundamental definations is nessed distinguish the responsibility of laboratory that devolop a method those of laboratory abo will us method the gap." between the labotatens is bridged by the m transfer process i) pharamacetical industrial setmor
Derformation as well ay forming busis of inter-labortory gualification (213) profit © Experimental design: allows bids to be traced to an instrument in one labortory the method itself and specific operatory osco beings that both tab will be analy sed both analytical prepared & refren tative product sample © Bids / impression: associated with the assay of the former are clearly method	Nor itation & Knter labertry to Introduction It is necessary to fundamental definations is ness distinguish the responsibility of labortry that devolop a method those of laboratory abo will ay method the "gap" between the labotatens is bridged by the m transfer process i) pharamacetical industry setmine Analytical resarch & devolument of
<ul> <li>Information as well by forming basis of inter- labortony qualification (210) profit</li> <li>D Experimental design: allows bids take the traced to an instrument in one labortony the method itself and specific operator as beings that both lab will be deally and both analytical prepared &amp; representative, product sumple</li> <li>Bids / Impresion: associated with the assay of the former are clearly method</li> <li>Anomalous results It is associated</li> </ul>	Naxitation & Kntex labertray to Introduction It is necessary to fundamental definations is nessed distinguish the responsibility of labortray that devolop a method those of laboratory abo will us method the "gap" between the labotatens is bridged by the m transfer process ) pharamacetical industral setmine Analytical resarch & devolpment of greep tisually provides validables
<ul> <li>Information as well by forming basis of inter- labortery qualification (213) profit</li> <li>Experimental design: allows bids take traced to an instrument in one labortery the method itself and specific affandery the method itself and specific affandery as beings that both lab will be dealy ged both dradytical prepared grephen take product sample</li> <li>Bids / impression: associated with the assay of the former are clearly method</li> <li>Anomalow result: It is associated with the associated and a specific allows and allows and a specific allows and a specific</li></ul>	Nor itation & Knter labertry to Introduction It is necessary to fundamental definations is ness distinguish the responsibility of labortry that devolop a method those of laboratory abo will ay method the "gap" between the labotatens is bridged by the m transfer process i) pharamacetical industry setmine Analytical resarch & devolument of
<ul> <li>Information as well by forming basis of inter- labortony qualification (210) profit</li> <li>D Experimental design: allows bids take the traced to an instrument in one labortony the method itself and specific operator as beings that both lab will be deally and both analytical prepared &amp; representative, product sumple</li> <li>Bids / Impresion: associated with the assay of the former are clearly method</li> <li>Anomalous results It is associated</li> </ul>	Naxitation & Kntex labertray to Introduction It is necessary to fundamental definations is nessed distinguish the responsibility of labortray that devolop a method those of laboratory abo will us method the "gap" between the labotatens is bridged by the m transfer process ) pharamacetical industral setmine Analytical resarch & devolpment of greep tisually provides validables





Data Hel		Page 50. Oute
		- 110
") Method Natiadation report - 15 Supplified -		modification & revaliduation
to regulatory elgency a method & the		Lange de la la la la designa
supporting data in the origination wiewed -		Form devolpment luboration to designed
by both Manufatusing & control neviewing -		aboratory The essential element dre
chemists & one I more Vilidation labora		@ a written procedure - step by step
tonies at the agency.		description of manipulation specific
When the second se		regent, equipment internitesting & criticy
Validation of the chargered procedure.	1	Pahameters Coast The coalding
The assessments the Validation laborchy.		D method Validation Report - It contains
		experimental degin or dated that justing
anotherical procedure. It use at term		the conclusion the analytical method
domation in the me nouse situation is		D system suitability intended. It
V) ARD great P. pormally develop the oright of		defines the minimum acceptance on tens
method, who validates analytical methods _		to analysis
& who transfer them depend upon chum		- minigaly
Steinel.		Method Validation report:
OTMUST.	i>	The essential principle of method
vi) most of phormalentical companies-	/	tranfer emphasie the importance of
ADE ARD group die resposible for the		distinguishing between validation of
development of analytical method of		method transferr & established the
their chater is to prode appropriately		scientific gulification of a specific
method, specfication & stability duty		concerptical method Vielidenticin reform
BEELDD , SIXIP CUT, ST, S, SHUMING CAMAY	Sie	tranfer of a validated method is
what is different between method	1	governed by the sop establishes by
transper & varitution united noteon		the designated laborary which defined
method vidnitation Report		them'r acceptance performance interio
Introduction - There are five essential	200	relethed valudation report is d Pivotal
Principal, which will ensure successful method		POCUMENT FOR CIAN NEALLING CILLER
tranfor documention, communication		because it from the basis for any scul
acceptone criteria, implimention smethod		qualification of the method
the second		
	_	
iv] It is appropriate to renewcertain		s) Define i) linedychity ii) spespecit
aspects of the method validation report		5) Define i) linearcuity ii) spespecit > linearcuity'- It is defined the
iv] It is apprepriate to renewcertain aspects of the method Validation report which relates directly to the method transf		5) Define i) linearchity ii) spespecit ? linearchity: - It is defined the actual analytical reponse as a func
aspects of the method validation report which relates directly to the method trans		5) Define i) linearchity ii) spespecit 2 linearchity: - It is defined the cichuch analytical reponse as a func of analytical concentration & range
aspects of the method Validation report which relates directly to the method transfi process & there by qualify acceptable		5) Define i) linearchity ii) spespecit 2 linearchity: - It is defined the cichuch analytical reponse as a func of analytical concentration & range
aspects of the method Validation report which relates directly to the method transfi process & there by qualify acceptable performance in the designted lab		5) Define i) linearchity ii) spespecit 2 linearchity: - It is defined the citud analytical repanse as a func- of analytical concentration & reinge Precimites of region over which accel
aspects of the method Validation report which relates directly to the method transfi process & there by qualify acceptable performance in the designted lab () specificity (selectivity)	ey	5) Define i) linearchity ii) spespecit 2 linearchity: - It is defined the citud analytical repanse as a func- of analytical concentration & reinge Precimites of region over which accel
aspects of the method Validation report which relates directly to the method transfi process & there by qualify acceptable performance in the designted lab () specificity (selectivity) The defines abicity of the method to decirate	ey	5) Define i) linearcuity iij spespecit Dinearcuity: - It is defined the actual analytical reponse as a func of analytical concentration & range Precimites of region over which accel linearly presion & accuracy and aching
aspects of the method Validation report which relates directly to the method transfi process & there by qualify acceptable performance in the designted lab () specificity (selectivity)	ey	5) Define i) linearculity iij spespecit 2) Linearculity: - It is defined the chuch analytical reponse as a fina of analytical concentration & range Precimbes of region over which accept linearly presion & accuracy and achin spespecity: It defins abicity of th
aspects of the method Validation report which relates directly to the method transfi process of there by qualify acceptable performance in the designted lab () specificity (selectivity) 7) It defines abicity of the method to decirib measure the analyte to the excutsion to	ey	5) Define i) linearculity iij spespecit 2) Linearculity: - It is defined the chuch analytical reponse as a fina of analytical concentration & range Precimbes of region over which accept linearly presion & accuracy and achin spespecity: It defins abicity of th
aspects of the method Validation report- which relates directly to the method transit process & there by qualify acceptable performance in the designted lab () specificity (selectivity) T> It defines abiaity of the method to decirb reasure the analyte to the exculsion to reveal at components, which might inference	er	S) Define i) linedratity iij spespecit incuratity: - It is defined the actual analytical reponse as a final of analytical concentration & range Precimbes of region over which accept linenty presion & accuracy and achin spespecity: It defins abiaity of the method to describe measure the anal
aspects of the method Validation report which relates directly to the method transfi process & there by qualify acceptable performance in the designted lab () specificity (selectify) is It defines abiatly of the method to decire nearly the analyte to the exculsion to reveal to components, which might inferences a) exeminent: to establish method separation	ex	5) Define i) linearcuity ii) spespecity Cichuch analytical reponse as a fina of analytical concentration & range Precimites of region over which accept linearly presion & accuracy end action Spespecity = It defins abicity of the method to describe measure the anal to the exclusion of revelant comp
aspects of the method Validation report which relates directly to the method transfi process & there by qualify acceptable featbarning in the designted lab () specificity (selectivity) is It defines abicity of the method to decirb measure the analyte to the exculsion to reveal to components, which might inference all experiment - to establish method separtic include envaluating matrix component day kn	ese ese ese hy auto	5) Define i) linearcuity ii) spespecity Cichuch analytical reponse as a fina of analytical concentration & range Precimites of region over which accept linearly presion & accuracy end action Spespecity = It defins abicity of the method to describe measure the anal to the exclusion of revelant comp
aspects of the method Validation report which relates directly to the method transfi process & there by qualify acceptable featbarnenic in the designted lab () specificity (scientify) is It defines abicity of the method to decirb measure the analyte to the Exculsion to reveal to components, which might informers all excement - to establish method separtic include envalating matrix component day kn metabel (components, such as synthesis - relation	ese ese ese hy auto	S) Define i) linearcuity ii) Spespeeit Jinearcuity: - It is defined the cickuc analytical reponse as a func- of analytical concentration & range Precimites of region over which accept linearly presion & accuracy end action Spespecity: It defins abicity of the method to describe measure the anal to the exclusion of revelant comp which might integer is called spesp
aspects of the method Validation report which relates directly to the method transfi process & there by qualify acceptable featurations in the designted lab () specificity (selectify) The defines abicity of the method to decirbs measure the analyte to the excusion to reveal components, which might inferences a) experiment: to establish memod separation include envaluating math component any know related components. Such as Synthesis - relation importies & degradation on Products	er ef ef	5) Define i) linearcuity ii) SPESPERITY Linearcuity: - It is defined the cichuch analytical reponse as a func- of analytical concentration & range Precimites of region over which accept linearty presion & accuracy end action SPESPECITY: It defins abicity of the method to describe measure the anal to the exclusion of revelant comp which might integer is called spesp s) Give the differncy between Aquee
aspects of the method Validation report which relates directly to the method transfi process & there by qualify acceptable featurations in the designted lab () specificity (selectify) The defines abicity of the method to decirbs measure the analyte to the excusion to reveal components, which might inferences a) experiment: to establish memod separation include envaluating math component any know related components. Such as Synthesis - relation importies & degradation on Products	er ef ef	S) Define i) linearcuity ii) spespecity incorratity: - It is defined the actual analytical reponse as a func- of analytical concentration & range. Preambes a region over which accel linearity presion & accuracy one action spespecity: It defins a highly of the method to describe measure the anal to the exclusion of revelant comp which might integer is called spesp S Give the differency between Aqueo & Persition
aspects of the method Validation report which relates directly to the method transfi process & there by qualify acceptable performance in the designted lab () specificity (selectify) The defines ability of the method to decirb measure the analyte to the excuteion to reveal components, which might inferences a) experiment: to establish memod separation include envaluating math component anythm metated components. Such as Synthesis - relation imprinties & degradation on Products TT, less relivent component such as metabol	222	S) Define i) linedratily ii) spespecity linearatily: - It is defined the actual analytical reponse as a func- of analytical concentration & range Preambes a region over which accel linearly presion & accuracy one action spespecity: It defins a bicity of the method to describe measure the anal to the exclusion of revelant comp which might integer is called spess S Give the differency between Aqueo & Persition
aspects of the method Validation report which relates directly to the method transfi process & there by qualify acceptable featurmence in the designted lab () <b>Specificity (Selectify)</b> 73 It defines abiently of the method to decirb measure the analyte to the Exculsion to reveal to components, which might informers all Experiment: to establish method separation include envaluation may be method to decirb method components such as synthesis - relation imperies & degradation on Products ID less relevent component such as metdool or isomers, which might help to define the	er ef autorities	S) Define i) linearcuity ii) spespecity linearcuity: - It is defined the cloud analytical reponse as a func- of analytical concentration & range Precimbes of region over which accel linearty presion & accuracy end achine spespecity: It defins abicity of the method to descibe measure the anal to the exclusion of revelant comp which might integer is called spess of Give the differncy between Aqueo & Porsition > Accuracy:-
aspects of the method Validation report which relates directly to the method transfi process & there by qualify acceptable feathamaine in the designted lab () specificity (selectivity) The defines abicity of the method to decirb measure the analyte to the exculsion to reveal components, which might inferences all experiment: to establish memod separation include envaluating math component anythe include envaluating math component anythe metated components. Such as Synthesis - relation imprinties & degradation on Products The less relivent component such as metabol or isomers, which might help to define the limits of 4 method resolution may all	er ef autorities	S) Define i) linearculity iij spespecit linearculity: - It is defined the cloud analytical reponse as a func of analytical concentration & range Precimbes of region over which accel linearity presion & accuracy end achin spespecity: It defins abicity of the method to descibe measure the anal to the exclusion of revelant comp which might integer is called spesp of Give the differency between Aqueo & Persition > Accuracy:- I) The recovery of the analyte of I
aspects of the method Validation report- which relates directly to the method transis process & there by qualify acceptable performance in the designhed lab (D) specificity (S electrity) To It defines abiatly of the method to decirb reasure the analyte to the Ecculsion to reveal components, which might inforences all experiment: to establish memod separation include envaluting math component anythmeticated components. Such as synthesis - relation method to degradation on products It less relivent component such as methods arisomers, which might help to define the limits of a method resolution may all envalued	ef hy auto s s s s c	<ul> <li>Define i) linearculity iij spespecit</li> <li>Dinearculity'- It is defined the calculated analytical repense as a funct of analytical concentration &amp; range.</li> <li>Precimbes a region over which accels linearity presion &amp; accuracy and achieves a specify and the defines a bicity of the method to describe measure the analyte of the exclusion of revelant compation might integer is called spess</li> <li>Give the differency between Aqueo &amp; Persition</li> <li>Accuracy:-</li> <li>The recovery of the analyte of i</li> </ul>
aspects of the method Validation report which relates directly to the method transfi process & there by qualify acceptable feathamaine in the designted lab () specificity (selectivity) The defines abicity of the method to decirb measure the analyte to the exculsion to reveal components, which might inferences all experiment: to establish memod separation include envaluating math component anythe include envaluating math component anythe metated components. Such as Synthesis - relation imprinties & degradation on Products The less relivent component such as metabol or isomers, which might help to define the limits of 4 method resolution may all	ef hy auto s s s s c	<ul> <li>Define i) linearculity iij spespecit</li> <li>Define i) linearculity iij spespecit</li> <li>Linearculity: - It is defined the cloud analytical repense as a funce of analytical concentration &amp; range.</li> <li>Precimbes of region over which access of the linearty presion &amp; accuracy end aching</li> <li>Spespecity: It defins abicity of the method to describe measure the analytic analytication of revelant compatibles inteder is called spess</li> <li>Give the differency between Aqueo &amp; Persition</li> <li>Accuracy:-</li> <li>The recovery of the analyte of i form the given matrix can be utility or the given method set of the accuracy contains the given method and the given method set of the accuracy of the analyte of i form the given method can be utility or the accuracy of the accuracy of the accuracy of the analyte of i form the given method can be utility or the accuracy of the accuracy or the accuracy or the accuracy of the accuracy or the accuracy or the accuracy or the accuracy of the accuracy or the</li></ul>
aspects of the method Validation report- which relates directly to the method transis process & there by qualify acceptable performance in the designted lab (D) specificity (scientify) T> It defines abidity of the method to decirbs nearsyne the analyte to the Exculsion to reveal the analyte to the Exculsion to reveal components, which might inforences all experiment: to establish memod separation related components, such as synthesis - relation related components. Such as methods of isomers, which might belp to define the limits of a method resolution may all enclude ated DES & similar assessment is repeated aft	ef ly auto ssc	S) Define i) linedratily ii) SPESPecity Linearatily: - It is defined the citual analytical repanse as a func- of analytical concentration & range Preambes of region over which accel linearly presion & accuracy one defin SPESPECITY: It defins abicity of the method to describe measure the anal to the exclusion of revelant comp which might inteder is called spess of Give the differency between Aqueo & Parsitian > Accuracy:- I) The recovery of the analyte of I form the given mathix can be u as a measure of the accuracy or of the method.
aspects of the method Validation report- which relates directly to the method transis process & there by qualify acceptable performance in the designted lab () specificity (scientify) The defines abiatly of the method to deciribin nearly the datalyte to the Exculsion to reveal the analyte to the Exculsion to relate the analyte to the Exculsion to relate the the the the the to the Exculsion to relate the the the the the the to the the the limits of a method resolution may all Excult aled W) A similar assessment is repeated aft stressing the draw to acception the depended is	ef ef ed ille e ex ob	S) Define i) linearcuity ii) spespecity Linearcuity: - It is defined the cloud analytical reponse as a func- of analytical concentration & range Decambes of region over which accel linearly present & accuracy one action spespecity: It defins abicity of the method to describe measure the anau- to the exclusion of revelant comp ubich might inteder is called spess (Give the differency between Aqueo & Persition > Accuracy:- I) The recovery of the analyte of I form the given matrix can be u do a measure of the accuracy or of the method
aspects of the method Validation report which relates directly to the method transis process & there by qualify acceptable performance in the designted lab () specificity (scientify) The defines abiaty of the method to decirib- neasure the analyte to the exculsion to revealed components which might inference include envaluation math component any kn related components such as synthesis - relation importing & degradation on Products IT less relivent component such as metabol or isomers, which might to define the limits of a method resolution may al envalued IT I assessment is repeated aft stressing the drug to acceptate degradation under the influence of heart, light axidation	ef ef ed ille e ex ob	S) Define i) linearcuity ii) spespecity Linearcuity: - It is defined the cloud analytical reponse as a func- of analytical concentration & range Decambes of region over which accel linearly present & accuracy one action spespecity: It defins abicity of the method to describe measure the anau- to the exclusion of revelant comp ubich might inteder is called spess (Give the differency between Aqueo & Persition > Accuracy:- I) The recovery of the analyte of I form the given matrix can be u do a measure of the accuracy or of the method
aspects of the method Validation report which relates directly to the method transis process & there by qualify acceptable performance in the designted lab () specificity (selectivity) rs It defines abicity of the method to decirbs neasure the analyte to the exculsion to revealent components which might inference () forement - to establish method separtic include envaluation math component day for metated components such as synthesis - relation importies & degradation on products II) less relivent component such as metabol or isomers, which might belp to define the limits of a method resolution may all envalued assessment is repeated aft stressing the drug to acceptate degradation (under the influence of heat, light axidation & acid & base hydrolysis	ef ef ed ille e ex ob	S) Define i) linearcuity ii) spespecity linearcuity: - It is defined the cloud analytical reponse as a func- of analytical concentration & range Dreambes of region over which accept linearly presion & accuracy end achine spespecity." It defins a bicity of the method to describe measure the anau- to the exclusion of revelant comp uhich might integer is called spess of Give the differency between Aqueo & Persition hectively. If the recovery of the analyte of 1 from the given matrix can be u as a measure of the accuracy or of the method III the Same range of Concentrati as employed in the linearty stu.
aspects of the method Validation report- which relates directly to the method transit process & there by qualify acceptable performance in the designted lab () specificity (scientify) rs It defines abicity of the method to decirb measure the analyte to the exculsion to revealent components which might inference () components which might inference () components which might inference () components such as synthesis - relation method components such as synthesis - relation include envaluation might below to define the limpinities & degradation on products II) less relivent component such as metabol or isomers, which might below to define the limits of a method resolution may all envaluated IV) A similar assessment is repeated aft stressing the drug to acceptate degradation (under the influence of heat, light axidation & acid & base hydrelysis b) Chromategraphic parameters:	e f du du s s c c c c c c c c c c c c c c c c c	S) Define i) linearcuity ii) spespecity incorratity: - It is defined the cloud analytical reponse as a func- of analytical concentration & range Preambes of region over which accel linearly preman & accuracy one achine spespecity: It defins a bicity of the method to describe measure the anal to the exclusion of revelant comp which might integer is called spess of Give the differency between Aqueo & Persition > Accuracy:- I) The recovery of the analyte of I form the given matrix can be u as a measure of the accuracy or of the method III The Same range of concentrati as employed in the linearity sture IIIs The linearity of experiment is
aspects of the method Validation report which relates directly to the method transfi process of there by qualify acceptable feathamanic in the designted lab () specificity (selectify) rs It defines abiatly of the method to decirb measure the analyte to the foculation to revealent components which might inference Include envalueing made component day kn metated components. Such as synthesis - relation include envalueing made component day kn metated components. Such as synthesis - relation include envalueing made component day kn metated components. Such as synthesis - relation importing & degradation on products II) less relivent component such as metabol or isomers, which might help to define the limits of a method resolution may all envaluated III) assessment is repeated aft stressing the drug to accelerate degradation where influence of heart, light acidation & acid & base hydrolysis b) Chromategraphic parameters: b) It is used as the bainimum Standar	e f	<ul> <li>Define i) linearcuity iij spespecity</li> <li>Define i) linearcuity iij spespecit</li> <li>Linearcuity: - It is defined the calculual analytical reponse as a funct of analytical concentration &amp; range</li> <li>Preambes of region over which accels linearly presion &amp; accuracy end acht inearly presion &amp; accuracy end acht inearly presion of revelant compations of revelant compations of revelant compations of revelant compations of free exclusion of revelant compations in the differency between Aqueo &amp; Persition</li> <li>Give the differency between Aqueo &amp; Persition</li> <li>Accuracy:-</li> <li>The recovery of the analyte of i form the given matrix can be under the accuracy or of the method</li> <li>The method</li> <li>The linearity of extendent is accurate the analyte of the method in the linearity studies and the linearity studies and the linearity of extendent is accurated in the linearity studies.</li> </ul>
aspects of the method Validation report which relates directly to the method transfi process of there by qualify acceptable feathamanic in the designted lab () specificity (selectify) rs It defines abiatly of the method to decirb measure the analyte to the foculation to revealent components which might inference Include envalueing made component day kn metated components. Such as synthesis - relation include envalueing made component day kn metated components. Such as synthesis - relation include envalueing made component day kn metated components. Such as synthesis - relation importing & degradation on products II) less relivent component such as metabol or isomers, which might help to define the limits of a method resolution may all envaluated III) assessment is repeated aft stressing the drug to accelerate degradation where influence of heart, light acidation & acid & base hydrolysis b) Chromategraphic parameters: b) It is used as the bainimum Standar	e f	S) Define i) linearculity iij spespecit linearculity: - It is defined the cloud analytical reponse as a func- of analytical concentration & range Precimbes of region over which accel linearity presion & accuracy end achine spespecity: It defins abicity of the method to descibe measure the anal to the exclusion of revelant comp which might integer is called spesp abich might integer is called spesp of five the differency between Aqueo & forsition Accuracy:- I) The recovery of the analyte of I form the given matrix can be u as a measure of the accuracy or of the method. III The Same range of concentrati as employed in the linearity stu- uits The linearity of exteriment is accented in the presence of matt (enstituents; in corporation of incomentation of the method)
aspects of the method Validation report- which relates directly to the method transis process & there by qualify acceptable performance in the designed lab (D) specificity (s electrity) reasure the analyte to the ecculsion to reveal components, which might inforences a) Experiment: to establish memod separtic include envaluing math component any kn related components, such as synthesis - related importing & degradation on products II) less relivent component such as method importing the drangth help to define the limits of a method resolution may all environments the drangth acceptated aft stressing the drangth acceptate degradation when the drangth acceptate degradations by chromatographic parameters: is It is used as the binimum Standar of performance in System Suitabalts	e f	S) Define i) linearculity iij spespecit linearculity: - It is defined the cloud analytical reponse as a func- of analytical concentration & range Precimbes of region over which accel linearity presion & accuracy end achine spespecity: It defins abicity of the method to descibe measure the anal to the exclusion of revelant comp which might integer is called spesp abich might integer is called spesp of five the differency between Aqueo & forsition Accuracy:- I) The recovery of the analyte of I form the given matrix can be u as a measure of the accuracy or of the method. III The Same range of concentrati as employed in the linearity stu- uits The linearity of exteriment is accented in the presence of matt (enstituents; in corporation of incomentation of the method)
aspects of the method Validation report- which relates directly to the method transis process & there by qualify acceptable performance in the designhed lab (D) specificity (S electrity) The defines abidity of the method to decirbs reasone the analyte to the Exculsion to reveal the analyte to the Exculsion to reveal components, which might information include envaluation math component any kn related components. Such as synthesis - relation related components such as synthesis - relation related components much component any kn related components such as synthesis - relation related components such as synthesis - relation related components such as method to ar isomers, which might help to define the limits of a method resolution may all enality assessment is repeated aft stressing the drug to accelerate depredation (under the influence of heat, light axidation & acid & base hydrolysis b) chromatographic parameters: is It is used as the minimum Standar of performance in System Suitabatity (D) The resolution of particulation of the formation of the suitabatity (D) the resolution of the concial fairs	ef Ly autoritike score score st	S) Define i) linearculity iij spespecit linearculity: - It is defined the cloud analytical reponse as a func- of analytical concentration & range Precimbes of region over which accel linearity presion & accuracy end achine spespecity: It defins abicity of the method to descibe measure the anal to the exclusion of revelant comp which might integer is called spesp abich might integer is called spesp of five the differency between Aqueo & forsition Accuracy:- I) The recovery of the analyte of I form the given matrix can be u as a measure of the accuracy or of the method. III The Same range of concentrati as employed in the linearity stu- uits The linearity of exteriment is accented in the presence of matt (enstituents; in corporation of incomentation of the method)
aspects of the method Validation report- which relates directly to the method transis process & there by qualify acceptable performance in the designted lab (D) specificity (s electrity) rs It defines abiency of the method to decirbs reasons the analyte to the Ecculsion to reveal the components such as methods and the components such as methods of isomers, which might help to define the limits of a method resolution may all encluated IN the influence of heat, light acidatis & acid & base hydrelysis b) Chromoulographic parameters: is It is used as the minimum Standar of performance in System suitabelts The resolution of the Chromoulographic formation of fairs of feaders in the Chromoulographic formation defines In the set of the chromoulographic formation of the fairs I he the set of the the influence of heat formation of the fairs I he the the fact of the fairs of the fairs of the fact of the fairs	ef Ly autoritike score score st	<ul> <li>Define i) linearculity iij spespecit</li> <li>Define i) linearculity iij spespecit</li> <li>Linearculity'- It is defined the concentration &amp; range</li> <li>Charlytical concentration &amp; range</li> <li>Precimbes of region over which accels</li> <li>Linearty presion &amp; accuracy end aching</li> <li>Spespecity's It defins abicity of the method to describe measure the analytic discriming to the exclusion of revelopt comparison of revelopt comparison</li> <li>Spespecity's It defines abicity of the method to describe measure the analytic discrimingst intected is called spessed which might intected is called spessed</li> <li>Give the differency between Aqueo &amp; Persition</li> <li>Accuracy'-</li> <li>The recovery of the analyte of it form the given matrix can be up as a measure of the accuracy or of the method</li> <li>The the same range of concentration is employed in the linearity studies in the linearity of exteriment is a constituents; in corporation of in a destribution froducts may also a</li> </ul>
aspects of the method Validation report- which relates directly to the method trentil process & there by qualify acceptable performance in the designted lab (D) specificity (scleevity) r) It defines abienty of the method to decirbe neasure the analyte to the ecculsion to reveal the components such as metabol or isomers, which might belp to define the limits of a method resolution may al excluded IF) I similar assessment is repeated aft stressing the drug to acceptive degradulic under the influence of heart, light acidati & acid & base hydrelysis b) Chromategraphic parameters: is It is used as the minimum Standar of performance in system suitabeity IT he resolution of a cheir formatogram defin- minimum seperation requiment	ef ille ex au ex au ex au ex au ex au ex au ex au ex au ex au ex au ex au ex au ex au ex au ex ex ex ex ex ex ex ex ex ex	S) Define i) linearcuity ii) spespecity Linearcuity: - It is defined the actual analytical reponse as a func- of analytical concentration & range Preambes of region over which accel linearly presion & accuracy one action spespecity: It defins abicity of the method to describe measure the anau- to the exclusion of revelant comp which might inteder is called spess (Give the differency between Aqueo & Persition > Accuracy:- I) The recovery of the analyte of I form the given matrix can be u as a measure of the accuracy or of the method III The Same range of concentrati as employed in the linearity stu- utes The linearity of experiment is respected in the presence of mat (enstituents; in corporation of in & descution products may also a precision:
aspects of the method Validation report- which relates directly to the method trentil process & there by qualify acceptable performance in the designted lab (D) specificity (scleevity) r) It defines abienty of the method to decirbe neasure the analyte to the ecculsion to reveal the components such as metabol or isomers, which might belp to define the limits of a method resolution may al excluded IF) I similar assessment is repeated aft stressing the drug to acceptive degradulic under the influence of heart, light acidati & acid & base hydrelysis b) Chromategraphic parameters: is It is used as the minimum Standar of performance in system suitabeity IT he resolution of a cheir formatogram defin- minimum seperation requiment	ef ille ex au ex au ex au ex au ex au ex au ex au ex au ex au ex au ex au ex au ex au ex au ex ex ex ex ex ex ex ex ex ex	S) Define i) linearculity ii) SPESPecity Linearculity: - It is defined the cickuch analytical reponse as a func- of analytical concentration & range Decembers of region over which accel linearly present & accuracy end action SPESPECITY: It defins a bicity of the method to describe measure the anal to the exclusion of revelant comp uhich might integer is called spess of Give the differency between Aqueo & Persition > hecturacy:- I) The recovery of the analyte of 1 from the given matrix can be u d3 a measure of the accuracy or of the method III The Same range of Concentrati as employed in the linearity stu III The linearity of experiment is repeated in the presence of mat (enstituents; in corporation of in & descrition Products may also a <u>Precision</u> : I) It refers to the Variacio
aspects of the method Validation report- which relates directly to the method trentil process & there by qualify acceptable performance in the designted lab (D) specificity (scleenvity) rs It defines abidity of the method to decire neasure the analyte to the Exculsion to reveal the analyte to the Exculsion to related components, which might informers. If (schement - to establish memod separation related components such as Synthesis - relation include envalating math component any the related Components such as Synthesis - relation include envalues and the products IT is less relivent component such as method of isomers, which might help to define the limits of a method resolution may all envaluated IT is used as the content depended in a coid & base hydrelysis b Chromategraphic parameters: is It is used as the binimum Standar of performance in System suitabatits The resolution of a circial Pairs plants in the Chromategraphic plants in the Chromategraphic plants in the Chromategraphic IT is used as the thin factor in the minimum resolution factor in	ef ille ex s c c d 	S) Define i) linearculity ii) SPESPecit Linearculity: - It is defined the cickuch analytical reponse as a func- of analytical concentration & range Dreambes of region over which accel linearly presion & accuracy end action Spespecity: It defins abicity of the method to describe measure the anal to the exclusion of revelant comp which might integer is called spess a five the differency between Aqueo & Persition > hecuracy:- I) The recovery of the analyte of 1 form the given matrix can be u as a measure of the accuracy or of the method III The Same range of concentrati is employed in the linearity studies reponded in the linearity studies reponded in the presence of matrix constituents; in corporation of in & descution products may also a precision: I) It refers to the Variabity of analytical rescut as a function
aspects of the method Validation report- which relates directly to the method transis process & there by qualify acceptable performance in the designted lab (D) specificity (scientify) TS It defines abidity of the method to decirity nearly the analyte to the exculsion to reveal to components, which might inferences all exteriment: to establish method separation related components such as synthesis - relation include envaluation may be products TT less relivent component such as metabol of isomers, which might to define the limits of a method resolution may all excutuated Excultated TT less relivent component is repeated aft stressing the drug to acceptuate degradulic under the influence of heat, light oxidations & acid & base hydrelysis b) Chromategraphic parameters: IS It is used as the binimum Standar of feaformance in System suitabations of feaformance in System autobations of feaformance in System is a second for the informategraphic for a second formated and the informategraphic for a second formated and the formategraphic formated and the formategraphic for a second formated and the formategraphic formated and the formategraphic formategraphic for a second formated and the formategraphic for a second formated and the formated and the formated and the formategraphic formated and the formategraphic formategraphic formategraphic formated and the formategraphic formateg	ef ille ex s c c d 	S) Define i) linearcuity ii) SPESPecity Linearcuity: - It is defined the actual analytical reponse as a func- of analytical concentration & range Dreambes of region over which accel linearly presion & accuracy end action Spespecity: It defins abicity of the method to describe measure the anal to the exclusion of revelant comp which might integer is called spesp a Give the differency between Aque of & Persition > hecturacy:- I) The recovery of the analyte of i form the given matrix can be us as a measure of the accuracy or of the method III The Same range of concentrati as employed in the linearity stude to the linearity of experiment is reponded in the presence of mat (onstituents; in corporation of in & descution products may also a precision: I) It refers to the Variabity of analytical result as a Discipation
aspects of the method Validation report- which relates directly to the method trentil process & there by qualify acceptable performance in the designted lab (D) specificity (scleenvity) rs It defines abidity of the method to decire neasure the analyte to the Exculsion to reveal the analyte to the Exculsion to related components, which might informers. If (schement - to establish memod separation related components such as Synthesis - relation include envalating math component any the related Components such as Synthesis - relation include envalues and the products IT is less relivent component such as method of isomers, which might help to define the limits of a method resolution may all envaluated IT is used as the content depended in a coid & base hydrelysis b Chromategraphic parameters: is It is used as the binimum Standar of performance in System suitabatits The resolution of a circial Pairs plants in the Chromategraphic plants in the Chromategraphic plants in the Chromategraphic IT is used as the thin factor in the minimum resolution factor in	ef ille ex s c c d 	S) Define i) linearculity ii) SPESPecity Linearculity: - It is defined the cickuch analytical reponse as a func- of analytical concentration & range Decembers of region over which accel linearly present & accuracy end action SPESPECITY: It defins a bicity of the method to describe measure the anal to the exclusion of revelant comp uhich might integer is called spess of Give the differency between Aqueo & Persition > hecturacy:- I) The recovery of the analyte of 1 from the given matrix can be u d3 a measure of the accuracy or of the method III The Same range of Concentrati as employed in the linearity stu III The linearity of experiment is repeated in the presence of mat (enstituents; in corporation of in & descrition Products may also a <u>Precision</u> : I) It refers to the Variacio



Ph.: 02427-231384 Email: sonaicollege@yahoo.co.in, mesacsccollege@gmail.com Website:www.acssonaicollege.com Affiliated to Savitribai Phule Pune University, Pune (I.D.PU/AN/ASC/031/1989) NAAC Re-accredited with 'A' Grade, DBT Star College Scheme, ISO 9001: 2015 Certified, AISHE Code – C-42096

, एज्युकेशन सोर

मुळा

Property in the second se	Assignment No-2
TTA The challenge I does not be	
I) The statistical data generaled to	1) write a short note on overview of
attaction e assay presions essented	would wilde regulation use for the
III) for efficiency, analys can be both	Validation methods used in phonomaceu
linenity & recovery daity for the statute	analysis
	> ® The Charles of the sublice of
INJ TO include additional ther of company.	> 10 The European community guidlines -
	In Jaly 1989 Sthem in 1942, the LG
tive analyses of the sample of repeatiality	issued an analytical validation guide
-e product assuring of minimum of ten	in their publication " The Rules Golvenny
replication.	medicinal product in European community
	in The European Gidelines Indicate that
Explain the termes chromatogaphic	and accurate the subernes indicate that
Parameters	one applicable to the following section
Parameters The is defined the neural	of the Chemical phamaecutical of
> A) Linernity - It is defined the actual	protogical documentation
analytical response ds of function of	11. A genologment phoram cettes
analytical concentration & range press	11.8 In-process control during manfactury
bes aregion over which acceptable	is control tests on intermediate produce
inedvity precision & accord are achie	The capter is an intermediate product
incoming, precision & accord areacher	WE control tested on the Finished produc
	ILF Stabicity
d) Accurding - The recovery of the	1111 The guidlines state that never biddeling
analyte of interst from the given	of the procedure may be necessary in
matrix can be used as a measureral	certain cirumstances such as transfer
marina con the color of the method	from antibilitient to show as pringter
the accurcy of bias of the method	Form aparytical deversoment qualifit
	CONTROL OF WARD SI SHIFCHAL PRIMARIES
4) Precision - It refers to the Vorid	
bility of an analytical result as function	ALCORED COLLO THE COMPACILIAN OF I
of operator, method manipulation of	Finished product have occurred. The degre
	of revelidentian dear lander the degree
day to day envoment. To include	of revalidation depends upon the naking
additional their of comparative	
annual of the company of personality	a) I deptification see
UTUNERS OF THE SOUTHE OF TEROPERTIN	and the state of t
analyses of the sample of repersentited	a) Identification Specificity
tive product denally a minimized of the posting of the product denally a minimized of the posting of the postin	b) Impunity content test specificity limit of decreation or limit of quilitity
tive product deridly a minimized of	
tive product desiredly a minimized of	Limt of decrection or limit of a untration
Hive product desiredly a minimation of replication	Limt of decrection or limit of a untration
iv) General recommendation are given which require that the precedure	Limt of deciection or limit of authors (may us deciection or limit of authors) (may us the biological sample study
Hive product itsucity a minimitum of replication in General recommendation are given which require that that the procedure includes method principles & are described -	2) How the biological sample study DSA guidlines
ivit General recommendation are given abien require that that the procedure includes method principles & are desembed - In such away that they maybe reproded	2) How the biological sample study DSA guidlines food & Darg
ivit General recommendation are given abien require that that the procedure includes method principles & are desembed - In such away that they maybe reproded	2) How the biological sample study DSA guidines The united stares food & Darg administration: The prepart was not
Hive product itsucity a minimizer of replication in General recommendation are given which require that that the procedure includes method principles & are described in such away that they maybe repeated by regulatory authority or state largert demes	2) How the biological sample study DSA guidlines food & Darg administration: The prepart was Int devealogment of us quiddlines on the
Hive product descully a minimized of replication	2) How the biological sample study DSA guidances DSA guidances food & Darg administration: The propert was Int to provide a frammeric of the Par devectopment of us guiddline on the Subject same Provide to Securate
Hive product itsucity a minimized of replication	2) How the biological sample study DSA guidances DSA guidances food & Darg administration: The propert was Int to provide a frammeric of the Par devectopment of us guiddline on the Subject same Provide to Securate
Hive product itsucity a minimized of replication in General recommendation are given which require that that the procedure includes method principles & are described in such away that they maybe infrared by regulatory automity or state larrest demes of In a chromatographic system a system suitability test should be provided the details formulas for result calculation	2) How the biological sample study administration or limit of authining 2) How the biological sample study USA guidines The united states food & Daig administration. The prepart was Ind to provide a framwork of the Par devectopment of us guidelined the Par
Hive product desiredly a minimized of replication in General recommendation are given which require that that the procedure includes method principles & are described in such away that they maybe repeated by regulatory authority or state larger defines of In a chromatographic system a system suitabaity test should be provided the details formulas for result calculation should be given to gether with precise	2) How the biological sample stady DSB guidlines DThe united states food & Drag administration. The prepart was in the provide a frammanic of the fun- devectopment of us guiddlineson the subject same provide & requiring food established avail method drages
Hive product desiredly a minimized of replication in General recommendation are given which require that that the procedure includes method principles & are described in such away that they maybe repeated by regulatory authority or state larger defines of In a chromatographic system a system suitabaity test should be provided the details formulas for result calculation should be given to gether with precise	2) How the biological sample study USA guidelines 2) How the biological sample study USA guidenes administration: The prepart was int to provide a frammentic of the fur development of us guidelineson the subject same foncibles & requiring for established availed method on described & include Deach step she be investigated to deforme the off
Hive product delicity a minimized of replication in General recommendation are given which require that they the procedure includes method principles & are described includes method principles & are described by regulatory authority or state laroral demes of The chromatogruphic system a system sultabaily test should be provided the details formulas for result calculation should be given to getter with precise desconptions of equipment of commencely	2) How the biological sample study administration or limit of authining 2) How the biological sample study DSA guidines administration: The propert was Ind to provide a framment of the fun- devectopment of us guideline on the Subject same provides & regulation for established dvalid method ch described & include Ocach step sho de investigated to detomine the sho be unich matrix & environmental vice
Hive product descully a mignitum of replication in General recommendation are given which require that that the procedure includes method principles & are described in such away that they maybe repeated by regulatory authority or state larger demes of The chromatographic system a system suitabaity test should be provided the details formulas for result calculation should be given to getter with precise descriptions of equipment of commencelly avidule the details of a method as similar	2) How the biological sample stady DSA guidlines DSA guidlines
Hive product descully a mignitum of replication in General recommendation are given which require that that the procedure includes method principles & are described in such away that they maybe repeated by regulatory authority or state larger demes of The chromatographic system a system suitabaity test should be provided the details formulas for result calculation should be given to getter with precise descriptions of equipment of commencelly avidule the details of a method as similar	2) How the biological sample study DSA guidlines DSA guidlines to provide a framwork of the Par described & include geseth step she be investigated to detomine the ed to which matrix & environment of the analyte type. B method validation
Hive product desided a minimizer of replication in General recommendation are given which require that that the procedure includes method principles & are described in such away that they maybe repeated by regulatory authority or state larent demes of The chromatographic system a system suitabaity test should be provided the details formulas for result calculation should be given to getter with precise descriptions of equipment of commencedly avidine The details of a method as similar as possible using standard equipment Should be given to found in pharme	2) How the biological sample study administration or limit of authinia 2) How the biological sample study DSA guidines administration: The pepert was Ind to provide a framment of the fun- devectopment of us quiddlines the Subject Same provides & requiring for established dvalid method on described & include Desch step she be investigated to determine the en- ter which matrix & environment al va- caud affect the determination of the analyte. type. @ A method . The so
Hive product descutly a mignitum of replication in General recommendation are given which require that that the procedure includes method practices & are described in such away that they maybe reproded by regulatory authority or state larent denies of Th a Chromatogruphic System a system sultabelity test should be provided the details formulas for result calculation Should be given to getter with precise desconptions of equipment of compendity avidate the details of a method as similar as possible Using standard equipment Should be given method found in pharme	2) How the biological sample study and the biological sample study 2) How the biological sample study DSB guidlines The united states food & Drig administration: The prepart was Int to provide a frammenti of the Par devectopment of us guidelineson the subject same ponciples & requiring for established dvalid method dri described & include Deech step she be investigated to detomine the ed to matrix & environment of the caud affect the determination of the analyte type. Of method Validation prefers should be previded. The sa biological methors should be used f
Hive product detectly a mignitum of replication W General recommendation are given which require that that the procedure includes method principles & are described in such away that they maybe repeated by regulatory cuthenity or state larger descriptions of equipment of compensation within the given to getter with precise descriptions of equipment of compensation should be given to getter with precise descriptions of equipment of compensation should be given to getter with precise descriptions of equipment of compensation should be given to getter with precise descriptions of equipment of compensation should be given to getter with precise descriptions of equipment of compensation of provide the details of a method as similar as possible using standard equipment Should be given method found in charme colored are concisedered to be validated provide that they are used for the interded	2) How the biological sample study USA guidines 2) How the biological sample study USA guidines OTHE United stars food & Drag administration: The prepart was int to provide a framwark of the fur development of us guiddlineson the subject some poncies & regularity for established dvalid method dra described & include Deach step sho described & include Deach step sho be investigated to detomine the exit to which matrix & environment of A analyte type. B method validation refers should be provided. The sa biological matrix should be used f
Hive product desired a minimizer of replication in General recommendation are given which require that that the procedure includes method principles & are described in such away that they maybe repeated by regulatory authority or state larger details formulas for result calculation subtractly test should be provided the details formulas for result calculation should be given to gether with precise descriptions of equipment of compenciely avidate the details of a method as Similar as possible using standard equipment should be given method found in pharme colored are concisedered to be validated provided that they are used for the interdes application Similarly, reference substaine	2) How the biological sample study alministration or limit of authors 2) How the biological sample study DSA guidlines administration: The propert was Int to provide a framwork of the fun development of us guiddlines the Subject same provides & requiring for established avail method on described & include Desch step Sho be investigated to detomine the ext to able of the provided the officer addition matrix & environmental vice could affect the determination of the addition as in the intended of validation as in the intended of Subject Should be provided. The sa
Hive product descully a mignitum of replication in General recommendation are given which require that they the procedure includes method principles & are described includes method principles & are described in such away that they maybe referred by regulatory authority or state larorit demes of The chromatogruphic system a system suitaboity test should be provided the details formulas for result calculation should be given to gether aith precise desconptions of equipment of commencially avidable The details of a method as similar as possible using standard equipment Should be given to gether aith precise desconptions of equipment of commencially avidable the details of a method found in pharma coppered and concisidered to be validated provided that they are used for the interded application similarity, reference substance should be eventicated for their interded	2) How the biological sample study DSA guidlines DSA guidlines
Hive product detectly a mignitum of replication w) General recommendation are given which require that that the precedure includes method principles & are described in such away that they maybe reproved by regulatory cuthority or state larger descriptions of example operated the details formulas for result calculation shall be given to getter with precise descriptions of equipment of commencally aviable the details of a method as Similar as possible using standard equipment shall be given to getter a similar as possible using standard equipment shall be given to getter as similar as possible using standard equipment shall be given to getter as similar as possible using standard equipment shall be given to getter a similar as possible using standard equipment shall be given for the intender application similarity, reference substance application similarity as for the intended provised that shegare used for the intended application similarity and the intended prove complete dated shearing variability	2) How the biological sample study DSA guidlines DSA guidlines
Hive product desided a minimized of replication will General recommendation are given which require that that the procedure includes method principles & are desambed in such away that they maybe repeated by regulatory authority or state larger details formulas for result calculation subtractly test should be provided the details formulas for result calculation should be given to gether with precise descriptions of equipment of compensation should be given to gether with precise descriptions of equipment of compensation should be given to gether with precise descriptions of equipment of compensation should be given to gether with precise descriptions of equipment of compensation should be given to gether with precise descriptions of equipment of compensation should be given to gether with precise descriptions of equipment of compensation should be given to gether with precise should be given to gether with precise application similarity, reference substaine should be evaluated for their interded purpose complete data should y valuation should be indicated.	2) How the biological sample study 2) How the biological sample study 050 guidines 050 guidines
Hive product detectly a mignitum of replication w) General recommendation are given which require that that the precedure includes method principles & are described in such away that they maybe reproved by regulatory cuthority or state larger descriptions of example operated the details formulas for result calculation shall be given to getter with precise descriptions of equipment of commencally aviable the details of a method as Similar as possible using standard equipment shall be given to getter a similar as possible using standard equipment shall be given to getter as similar as possible using standard equipment shall be given to getter as similar as possible using standard equipment shall be given to getter a similar as possible using standard equipment shall be given for the intender application similarity, reference substance application similarity as for the intended provised that shegare used for the intended application similarity and the intended prove complete dated shearing variability	2) How the biological sample study align of deciection or limit of authine 2) How the biological sample study USA guidines The United states food & Daig administration: The pepert was Int to provide a frammenti of the Par devectopment of us guiddlinecon the subject same principles & regulation for established dvalid method dr described & include Decech step she be investigated to determine the ed to caud affect the determination of t analyte type. B method Nationation refers should be provided. The sa biological matrix should be used f validation as in the intended r sumples of the stability of the chuck samples patrix should determined the concentration range must be d in the method anlog stondard Cury denved@ An adequate no of stond
Hive product desided a minimized of replication will General recommendation are given which require that that the procedure includes method principles & are desambed in such away that they maybe repeated by regulatory authority or state larger details formulas for result calculation subtractly test should be provided the details formulas for result calculation should be given to gether with precise descriptions of equipment of compensation should be given to gether with precise descriptions of equipment of compensation should be given to gether with precise descriptions of equipment of compensation should be given to gether with precise descriptions of equipment of compensation should be given to gether with precise descriptions of equipment of compensation should be given to gether with precise descriptions of equipment of compensation should be given to gether with precise should be given to gether with precise application similarity, reference substaine should be evaluated for their interded purpose complete data should y valuation should be indicated.	2) How the biological sample study align of deciection or limit of authine 2) How the biological sample study USA guidines The United states food & Daig administration: The pepert was Int to provide a frammenti of the Par devectopment of us guiddlinecon the subject same principles & regulation for established dvalid method dr described & include Decech step she be investigated to determine the ed to caud affect the determination of t analyte type. B method Nationation refers should be provided. The sa biological matrix should be used f validation as in the intended r sumples of the stability of the chuck samples patrix should determined the concentration range must be d in the method anlog stondard Cury denved@ An adequate no of stond
Hive product detectly a mignitum of replication in General recommendation are given which require that that the procedure includes method principles & are described in such away that they maybe repeated by regulatory authority or state larent ternes of The Chromatographic system a system suitabaity test should be provided the details formulas for result calculation should be given to getter with precise descriptions of equipment of commencally avidine The details of a method as similar as possible using standard equipment Should be given to getter to be validated provided that they are used for the intended application similarly, reference substance should be evaluated for their intended Purpose complete dud shouing validity Bhand be indicated	2) How the biological sample stady DSA guidlines DSA guidlines Subject Some Ponoples & regumment fea estabilissed availed method of described & include Geech step She de unich matrix & environment al va caud affect the determination of the analyte type. B method Validation reform should be provided. The so Defond and matrix Should determined Sumples The Scallity of the druced f Validation as in the intended method Sumples The Scallity of the druced f the concentration minge must be d in the method angly signdard Curv downed B An adequate No of stand, must be, used to define advanced environed must be, used to define advanced environed DSA Stand
Hive product distictly a mignitum of replication W. General recommendation are given which require that that the procedure includes method principles & are described in such away that they maybe repeated by regulatory cuthenity or state larrent denes withoutly test should be provided the detrails formulas for result calculation Should be given to getter with precise descriptions of equipment of commencially avidate the details of a method as similar as foosible using standard equipment should be given the details of a method as similar should be given to getter with precise descriptions of equipment of commencially avidate the details of a method as similar as foosible using standard equipment should be given the formed found in pharme conciscioned to be validated provide that they are used for the interded provide that they are used for the interded provide that they are used for the interded provide the evoluted for their interded provide the indicated for their interded purpose complete dud shouing validating walfore (nike): I The Japanese regulating may Appman & intensing procedure ing	2) How the biological sample study 2) How the biological sample study DSA guidlines DSA guidl
Hive product desidedly a mignitum of replication in General recommendation are given which require that that the procedure includes method principles & are described in such away that they maybe repeated by regulatory authority or state larger demes of In a chromatographic system a system suitabaity test should be provided the details formulas for result calculation should be given to getter with precise descriptions of equipment of commencally avidite The details of a method as similar as possible using standard equipment Should be given to getter to be validated provided that they are used for the intended application similarly, reference substance should be evaluated for their intended provided that they are used for the intended provided be evaluated for their intended provided be evaluated for their intended provided be evaluated for their intended provided be evaluated for the intended provided be evaluated for the intended provided be evaluated for their intended provided be evaluated for their intended provided be evaluated for the intended provided be indicated. By The Japanese ministry of Health and welfore (milkali i) The Japanese regulating the light of the state specific guidan	2) How the biological sample study 2) How the biological sample study DSA guidlines DSA guidl
Hive product desided a minimized of replication in General recommendation are given which require that that the procedure includes method principles & are described includes method principles & are described includes method principles & are described by regulatory authority or state laroral denies OI Th a Chromatogruphic System a system sultabaily test should be provided the details formulas for result calculation Should be given to getter ait calculation Should be given to getter ait calculation of equipment of commencially avidate the details of a method as Similar as possible using standard equipment Should be given to getter with precise desconptions of equipment of commencially avidate the details of a method found in obtained consect are concisived for the interded provised that they are used for the interded application similarly, reference substance should be indicated for their interded purpose complete data shoung valuality should be indicated by the Japanese minishy of Health and welfore (Mikwi: 1) The Japanese regulation on the requirements for Japan iguz	2) How the biological sample study 2) How the biological sample study DSA guidlines DTA united stares food & Darg administration: The pepert was ind to provide a framwark of the Pur development of us quiddlines on the subject same provides & requiring for established dvalid method on described & include Deach step sho be investigated to detomine the ext to which matrix & environmental ha caughte type. D method validation reford should be provided. The sa biographic matrix should be used f validation as in the intended r Sumples the stability of the drug sample matrix should determined to concentration reinge must be d in the method and sig standard Curv downed An adequate no of stand must be used to define advacuets relationship between Concencentration of the accuracy precision with which known centred
Hive product distictly a mignitum of replication W. General recommendation are given which require that that the procedure includes method principles & are described in such away that they maybe repeated by regulatory cuthenity or state larrent denes withoutly test should be provided the detrails formulas for result calculation Should be given to getter with precise descriptions of equipment of commencally avidate the details of a method as similar as foosible using standard equipment should be given to getter with precise descriptions of equipment of commenced provide the details of a method as similar as foosible using standard equipment should be given the foot found in pharme concession are conciscioned to be validated provide that they are used for the interded provide the indicated for their interded provide the indicated for the interded provide the indicated for the interded application similarity reference substance should be indicated for the interded and usefore (nike): i) The Japanese regulation on the requirments for Japan igas analytical method yourd ation Tapan igas	2) How the biological sample study (int of deciection or limit of authors) 2) How the biological sample study USA guidlines (International stars food & Drag administration: The pepert was int to provide a framwark of the fur development of us guiddlineson the subject some foncibles & requires for established availed method for described & include Deach step sho be investigated to delomine the eff to which matrix & environmental ve caud affect the delermination of the biological mutrix should be used f validation as in the intended of the concentration may be delermined for established availed the end to which matrix & environmental ve caud affect the delermination of the biological mutrix should be used f validation as in the intended of the concentration mange must be d in the method anlog stondard Curv denved@ An adequate no of stond in the method anlog stondard Curv denved@ An adequate for of stond in the method anlog stondard Curv denved@ An adequate for of stond precession with ahlich known centre & nearly for the biological method
Hive product descelly a mignitum of replication will General recommendation are given which require that that the procedure includes method principles & are described in such away that they maybe repeated by regulatory authority or state larger details formulas for result calculation suitabative test should be provided the details formulas for result calculation should be given to gether with precise descriptions of equipment of compensative avidate the details of a method as Similar as foosible using standard equipment should be given to gether with precise descriptions of equipment of compensative avidate the details of a method as Similar as foosible using standard equipment should be given method found in pharme colored are concisedered to be validated provided that they are used for the interded application similarly, reference substaine should be evaluated for their interded purpose Complete data should go validative should be indicated. B) The Japanese minishy of Health and welfore (million) is the japanese regulative analytical method yourd ation. This has been equivaled to the scientific jugement	2) How the biological sample study (int of deciection or limit of authors) 2) How the biological sample study USA guidlines (International stars food & Drag administration: The pepert was int to provide a framwark of the fur development of us guiddlineson the subject some foncibles & requires for established availed method for described & include Deach step sho be investigated to delomine the eff to which matrix & environmental ve caud affect the delermination of the biological mutrix should be used f validation as in the intended of the concentration may be delermined for established availed the end to which matrix & environmental ve caud affect the delermination of the biological mutrix should be used f validation as in the intended of the concentration mange must be d in the method anlog stondard Curv denved@ An adequate no of stond in the method anlog stondard Curv denved@ An adequate for of stond in the method anlog stondard Curv denved@ An adequate for of stond precession with ahlich known centre & nearly for the biological method
Hive product detectly a mignitum of replication in General recommendation are given which require that that the procedure includes method principles & are described includes method principles & are described by regulatory authority or state larent termes of The Chromatographic system a system suitabaity test should be provided the details formulas for result calculation should be given to getter with precise descriptions of equipment of commencally avidate the details of a method as similar as possible using standard equipment Should be given to getter with precise descriptions of equipment of commencally avidate the details of a method as similar as possible using standard equipment Should be given to getter with precise descriptions of equipment of commenced provied that they are used for the intended provided that they are used for their intended provided that they are deviced for their intended provided that they are due to the intended on the requirements for jupan iguz analytical method yourd usion This has been entrusted to the scientific jugeme of each individual pharamecusi cal	2) How the histogical sample stady 2) How the histogical sample stady DSA guidlines DTA united stares food & Drag administration: The pepert was in to provide a framwark of the Par development of us quiddlines on the subject same propies & requirer for established dvalid method on described & include Deach step she be investigated to detomine the ext to which matrix & environmental va- caud affect the determination of t analyte type. DA method validation refers should be provided. The so biological matrix should be used f validation as in the intended r Sumples The stability of the druc sample matrix should determined to be concentration reinge must be d in the method and stad determined the concentration reinge must be d in the method and standard curv downed An adequate no of stand must be used to define advacuels relationship between Concencentrati & relationship between Concencentration of standing must be demonster be determined must be demonster be determined must be demonster
Hive module descelly a minimized of replication of replication and the descent of the process of the proces of the process of the proces of the proces of the proces of the	2) How the biological sample study (int of deciection or limit of auutrice) 2) How the biological sample study USB guildines (International stars food & Drag administration: The pepert was int to Provide a framwark of the fur development of us guiddlineson the subject some foncibles & require for established availed method dra described & include Deach step sho be investigated to delomine the off to which matrix & environmental va caud affect the determination of 4 described & include Deach step sho be investigated to delomine the off to which matrix & environmental va caud affect the determination of 4 biological matrix should be used f validation as in the intended The concentration runge must be de- in the method anleg standard Curv denved@ An adequate no of standard in the method anleg standard Curv denved@ An adequate of o film and in the method anleg standard in the method anleg standard curv denved@ An adequate fine actual of relationship between Concententiat & reception with which known center be determine must be demonster be determine must be demonster be determine must be demonster be determine must be demonster be determine must be demonster
Hive product distictly a mignitum of replication WJ General recommendation are given which require that that the precedure includes method principles & are described in such away that they maybe repeated by regulatory cutherity or state larger degrading cutherity or state larger details formulas for result calculation shall be given to getter with precise descriptions of equipment of compensation shall be given to getter with precise descriptions of equipment of compensation shall be given to getter with precise descriptions of equipment of compensation shall be given to getter with precise descriptions of equipment of compensation should be given to getter with precise descriptions of equipment of compensation should be given to getter with precise descriptions of equipment of compensation should be given to getter with precise descriptions of equipment of compensation should be given to getter with precise descriptions of equipment of compensation should be given to getter with the should be given the forther intendes application similarity, reference substaine should be evaluated for their intendes application similarity, reference substaine should be indicated by the Japanese minishy of Health and welfore (nitwit-i). The Japanese regulation on the requirments for tapan igus analyticul method yourd who This has been enhalsted to the scientific jugeme of each individual pharameculi cal company. Validation is mentioned where	2) How the biological sample study DSA guidline:

, इज्युकेशन सोर



Page 16-	Progetito. Dates
The study is intended tof Heath & Welfare. The study is intended to examine the observion of drugs & issues of test memods & promoterial to be determined. The only reference to validation appears in the test method section where it state "Assay method section where it state "Assay method asy the assay method & its Senitity precision specificity etc should be cleany defined. 3) Give the Gudline Provided by Europeo to analysis the biological sample ? The Europen community. D An Europen community provided basic guidance on the presentation of dated on the validation of test procedure. camed out for toxicologycal & pharmacological study. i) No it specific details are given out for low validation should be perform pat several recommendation are proved securit between laboratory it is Very important to be able to compare result between laboratory. Should be consided. always used, quality control between the laboratory is Aedicary.	5) What are gulideine provied by Japan to analysis pharmachican products whe Japan describes the typical analytical parameters used in assay Validation accurring precision, specific timit of detection limit of deciron limit of quantization, in early 3 mangesthe common validation schen 3) Data demonstrating Suitble accord precision & incompany overal aid e. mange the corresponding as Data demostrating that neither foresh new degraded place be interfernies with the proposed method s) Data characterizing dayto day, 10 tolab, analyst to analyst & contents column, variability

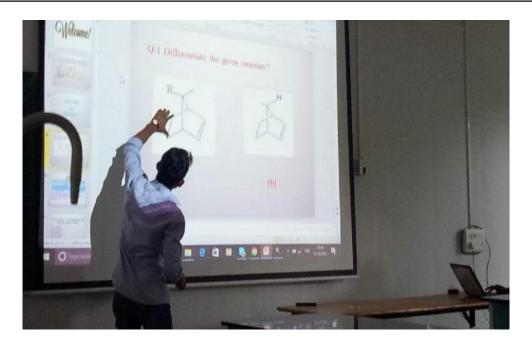


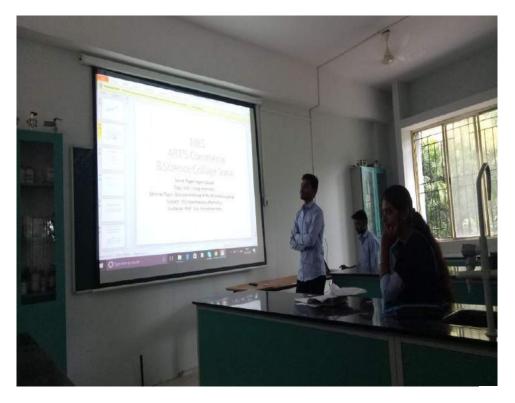
# 6. Sample of Offline Seminars Conducted



(Seminar by Department of Chemistry Conducted on 10/03/2023)







(Seminar by Department of Chemistry Conducted on 10/03/2023)

PRINCIPAL Mula Education Society's Arts, Commerce & Science College, Sonai, Tal. Newasa. Dist A'Nagar-414105